LAW OF THE SEA AND PEACEFUL USES OF THE SEABEDS

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BEFORE THE

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OF THE

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MONDAY, APRIL 10, 1972

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FOREIGN AFFAIRS,
SUBCOMMITTEE ON INTERNATIONAL
ORGANIZATIONS AND MOVEMENTS,
Washington, D.C.

The subcommittee met at 2:05 p.m. in room 2255, Rayburn House Office Building, Hon. Donald M. Fraser (chairman of the subcommittee) presiding.

Mr. FRASER. That meeting of the subcommittee will please come to order.

We are expecting several other members of the subcommittee, but I think we might start and I am sure they can catch up after arriving.

Today the subcommittee begins hearings on the law of the seas and peaceful uses of the seabeds. Our focus will be on the U.N.-sponsored Law of the Sea Conference planned for 1973 and the preparations for it. During the past month, while serving as a congressional adviser on the U.S. delegation to the meeting of the U.N. Committee on the Peaceful Uses of the Seabeds, I became more aware not only of the importance of this subject to peoples of all nations but also of its great technical, political, and legal complexities, all of which make it extremely difficult to reach agreements. But the alternative to comprehensive international agreements would appear to be an ever-increasing struggle among nations over the resources and uses of the seas and seabeds.

We hope that our hearings in this subcommittee will make some contribution toward better congressional and public understanding of this subject. In the course of the hearings over the next few weeks, we will attempt to get a clear and balanced definition of our national interests on the law of the seas and seabeds by hearing testimony from representatives of U.S. Government agencies, international legal and marine scholars, and representative experts on mining, petroleum, and fishing interests, among others.

This afternoon we are pleased to welcome a panel of expert witnesses from the executive branch led by the Honorable John Stevenson, Legal Adviser of the Department of State, who also serves as Chief of the U.S. Delegation to the U.N. Seabeds Committee. Mr. Stevenson is accompanied by Jared Carter, Office of Ocean Affairs in the Department of Defense; the Honorable Howard Pollock, a former Member of the House of Representatives and presently serving as Deputy Administrator of the National Oceanic and Atmospheric Agency; and Mr. Leigh Ratiner, Ocean Affairs Officer, Office of the Assistant Secretary of Interior for Mineral Resources.

Mr. Stevenson, you have a prepared statement and I understand you may wish to read it.

Mr. STEVENSON. I would like to.

Mr. FRASER. Very well. Please proceed.

STATEMENT OF JOHN STEVENSON, LEGAL ADVISER, DEPARTMENT OF STATE; CHIEF OF U.S. DELEGATION TO U.N. SEABEDS COMMITTEE

Mr. STEVENSON. Thank you, Mr. Chairman.

I do welcome this opportunity to appear before this committee today to discuss preparations for the Law of the Sea Conference. As you mentioned, I am accompanied by Mr. Howard Pollock, who represented the State of Alaska in the House of Representatives and who is now Deputy Director of the National Oceanic and Atmospheric Administration, Department of Commerce; Mr. Jared Carter, who is currently Deputy Director of the Office of Ocean Affairs, Department of Defense; and Mr. Leigh Ratiner, who is the Director of Ocean Resources, Department of the Interior.

Mr. Chairman, may I say how helpful it was to me as head of the U.S. delegation to the U.N. Seabed Committee that you were able to serve as a congressional adviser on our delegation and to spend some time with us in New York during the committee's March session. I hope you will continue this interest in the delegation. We continue to look forward to close and continuing contact with the Congress on the important questions involved in this negotiation.

Mr. Chairman, the nations of the world are now facing a crisis in the law of the sea. Basic principles that have governed the activities of men and nations on the seas for centuries are being challenged, and international procedures for adapting these principles to modern conditions are under severe strain. While we should not minimize the implications of this situation for specific uses of the seas, I believe there are also broader implications for the international community that should not be overlooked.

First, the law of the sea lies at the heart of modern international law as it emerged in the 17th century. Should it collapse under the weight of conflicting unilateral actions based almost exclusively on immediate national interests, the result will be a severe blow to the prospects for the rule of law not only in the oceans, but in the international community generally.

Second, the law of the sea governs the activities of States on, under, and over two-thirds of this planet. The importance of the oceans to the security and well being of all mankind is increasing at an extraordinary rate. It is clear that as the magnitude of interests in the seas increases, the danger of conflict—and hence the need for law—increases as well.

The United States is a party to the four conventions in the law of the sea adopted at the 1958 Conference on the Law of the Sea. While these conventions represent a very significant codification of the law of the sea, there are several problems with them. The 1958 conference, as well as a subsequent 1960 conference specifically called for this purpose, were unable to resolve the question of the maximum breadth of the territorial sea and coastal state fisheries jurisdiction. Moreover,

there was no agreement on a precise seaward limit for coastal state sovereign rights over seabed resources of the Continental Shelf. The issue of an international regime for the seabeds beyond this limit was considered premature at the time. The dangers of pollution were not yet fully appreciated.

At the same time, since World War II, many technological changes have occurred. Offshore oil and gas production is becoming a very significant source of energy constituting approximately 17 percent of the U.S. production at the present time in the case of petroleum. Technology is being developed looking to extraction on a commercial basis of hard minerals from manganese nodules on the deep ocean floor. Some of our experts anticipate that by the end of this decade we will have commercial production.

Nuclear submarines and supertankers have become important users of the oceans. Sophisticated methods of fishing have developed that increase the danger of overfishing and economic dislocation. Scientific research in the oceans is growing in importance not only to our understanding of the oceans, but to our total understanding of our planet and its environment, including the weather.

During the period since the 1958 and 1960 Law of the Sea Conferences coastal state claims over the oceans have proliferated. While the United States adheres to the territorial 3-mile limit for the territorial sea, a plurality of States now claim 12 miles. Some even claim more than 12 miles, and up to 200. Others have limited the substance of their claim to seabed resources and fisheries, but have also asserted such claims as far as 200 miles or more. Needless to say, should this trend continue unchecked, what would result is a partition of the oceans by coastal states—something that the law of the sea first addressed in the 17th century.

I should point out that a universal 200-mile limit would in itself embrace over 30 percent of the oceans—Soviet geographers calculate that it might be as much as 50 percent. This expansionist trend in maritime jurisdiction is also intensifying the nature of disputes regarding sovereignty over small islands and other land areas that would otherwise be of little significance, but that might be used to calculate extensive maritime jurisdiction.

For all these reasons, the 1973 Law of the Sea Conference acquires particular importance. The essential questions are whether we as a world community can adapt to technological change and act quickly enough to assure that such change benefits all of us, and whether we can outpace the trend in unilateral claims that will render negotiation far more difficult, if not impossible.

President Nixon clearly indicated our assessment of the seriousness of this situation at the start of his Statement on United States Oceans Policy of May 13, 1970:

> The nations of the world are now facing decisions of momentous importance to man's use of the oceans for decades ahead. At issue is whether the oceans will be used rationally and equitably and for the benefit of mankind or whether they will become an arena of unrestrained exploitation and conflicting jurisdictional claims in which even the most advanaged States will be losers.
>
> The issue arises now—and with urgency—because nations have grown increasingly conscious of the wealth to be exploited from the seabeds and throughout the waters above, and because they are also becoming apprehensive about ecological hazards of unregulated use of the oceans and seabeds. The stark fact is

that the law of the sea is inadequate to meet the needs of modern technology and the concerns of the international community. If it is not modernized multilaterally, unilateral action and international conflict are inevitable.

This is the time, then, for all nations to set about resolving the basic issues of the future regime for the oceans—and to resolve it in a way that redounds to the general benefit in the era of intensive exploitation that lies ahead. The United States as a major maritime power and a leader in ocean technology to unlock the riches of the ocean has a special responsibility to move this effort forward.

What emerged from the President's statement was a new United States oceans policy designed to accommodate a wide variety of domestic and international interests. Particularly with respect to maritime limits questions—which are among the most controversial—we sought to understand the major interests that lie behind positions in favor of broad limits and of narrow limits. It is our conviction that these interests can be harmonized or accommodated to a large degree in a general international settlement, if they are addressed by dealing with the real problems involved. Such an accommodation should be of greater value and duration than an arbitrary compromise.

I turn now to various elements of the President's policy.

The United States has recognized that the only practical possibility for agreement on the breadth of the territorial sea lies in acceptance of a 12-mile maximum limit. After careful study of our own reasons for adhering to the 3-mile limit, we decided that it would be possible to accept a 12-mile limit if it were broadly agreed, rather than unilaterally asserted, and if it were accompanied by agreement on free transit through and over international straits—that is, straits used for international navigation.

The reason why the United States is insisting on this guarantee of free transit through and over straits used for international navigation is that with the move from a three to a 12-mile territorial sea, international straits between 6 and 24 miles would become overlapped by territorial seas. While the right of innocent passage through the territorial sea in straits may not be suspended under the terms of the 1958 Convention on the Territorial Sea and the Contiguous Zone, innocent passage does not include submerged transit by submarine or overflight by aircraft.

Moreover, some coastal states have interpreted innocent passage subjectively, arguing for example that the flag, cargo, or destination of a vessel is a relevant consideration. The absence of clear guarantees of free transit through international straits would create a number of critical pressure points around the world where the potential for conflict could dramatically increase. We saw one such situation develop prior to the 1967 war in the Middle East.

Just as the question of navigation and overflight in straits within 12 miles of the coast is one key aspect of the territorial sea issue, the rights of coastal states over resources beyond a 12-mile territorial sea are another vital aspect of this same issue.

With respect to fisheries, there is no doubt that an international settlement cannot be reached that does not protect the regulatory interests of coastal states in fisheries well beyond 12 miles. The economic and social problems caused by highly mobile distant water fishing fleets using advanced methods are not unique to developing countries; our own coastal fishermen have the same problems. In order to resolve this problem, we have proposed delegating regulatory author-

ity to coastal states with respect to two types of fish that together comprise over 75 percent of the world's fish catch: Coastal species, that is species that normally reside off the coast; and anadromous species, that is species such as salmon that spawn in fresh water, then migrate far out to sea, and finally return to their streams of origin. The authority delegated to the coastal state would be subject to international standards, such as those designed to assure conservation and maximum utilization of fisheries as well as an agreed formula for historic fishing rights. We regard compulsory settlement of disputes as an essential aspect of any such settlement.

On the other hand, we do not believe there can be effective coastal state management of highly migratory oceanic species such as tuna, which appear off the coast of any one nation for only a short period of time. Accordingly, we propose that such species be managed by international and regional organizations.

I turn now to the seabeds. With respect to the seabed resources beyond the territorial sea, coastal states already enjoy sovereign rights for the purpose of exploring the Continental Shelf and exploiting its natural resources. As I indicated earlier, a precise limit for the exercise of such rights was not agreed to at the 1958 conference although it is clear that such rights extend at least to where the water reaches a depth of 200 meters (about 600 feet).

A precise limit would determine not only the extent of the seabed area subject to coastal state sovereign rights over resources, but also the size of the international seabed area that would be subject to a new international regime to be established by the law of the sea conference pursuant to the declaration of principles adopted by the General Assembly of the United Nations in 1970. With respect to the international area, the United States has proposed a new international organization to regulate and license exploration and exploitation and to collect revenues from such activities primarily for the benefit of developing countries.

In the context of considering alternative seabed limits, the narrowest limit on which agreement could conceivably be reached would be 200 meter depth line. Although the distance from shore of the 200 meter depth line varies from several miles to several hundred miles; an average would be less than 50 miles. Many developing coastal states have urged much broader limits for coastal state jurisdiction, such as 200 miles or the entire continental margin.

We have proposed an intermediate zone as a means of resolving this problem. The intermediate zone would begin at the 200-meter depth, or in cases where the waters reach a greater depth within 12 miles, at the edge of a 12-mile territorial sea, were agreement achieved on a 12-mile territorial sea. We proposed that the intermediate zone extend seaward to embrace the continental margin, but have also indicated last summer and at the most recent session of the U.N. committee our willingness to consider several criteria, including a mileage distance from shore, for the outer limit of the intermediate zone. Within the intermediate zone, coastal states would regulate exploration and exploitation, but there would also be international standards and compulsory dispute settlement designed, for example, to assure protection of other uses of the area, global protection of the marine environment from seabeds pollution, and some sharing of revenues with the international community.

In our view, scientific research in the oceans is, and should be, beneficial to all. The United States supports both maximum freedom of scientific research and maximum efforts to ensure dissemination of the results of such research. There is in our view no inherent contradiction between the exercise of resource jurisdiction by coastal states and the protection of free and open scientific research. On the contrary, such research can enhance the ability of coastal states to derive maximum benefits from resources under their jurisdiction. Thus, one important aspect of the intermediate zone proposal for the seabeds is that coastal states control over exploration and exploitation of resources would not restrict other uses of the area such as scientific research.

Finally, in this brief summary of U.S. policy I turn to pollution. The United States is vigorously seeking to bring ocean pollution under effective international regulation in a number of different forums. IMCO has produced several conventions on pollution from ships, and is continuing this work. Also significant are IMCO's attempts to lessen the chances of collisions at sea through such measures as traffic separation schemes. The United States is working for a convention on ocean dumping, an environmental monitoring system, an international fund for research, as well as other measures in the context of the 1972 Stockholm Conference on the Human Environment. The U.S. draft seabed treaty presented to the U.N. Seabeds Committee proposes that the international seabed organization to be established by the law of the sea conference be given broad regulatory and emergency powers in order to prevent pollution arising from exploration and exploitation, as well as from all deep drilling, in the international seabed area.

Also, one essential advantage of an intermediate zone on the seabeds is that minimum environmental standards can be fixed internationally, thus better assuring protection of the ocean environment as a whole, assuring coastal states that they will not suffer competitive economic disadvantage by applying such standards, and assuring coatal states not only the right to apply higher standards if they so choose, but the right to seek technical assistance from the international authority in doing so.

I now would like to summarize briefly the preparations to date for the 1973 Law of the Sea Conference next fall. The General Assembly will decide the precise date and agenda of the 1973 Law of the Sea Conference next fall. In the meantime, there have been three meetings of the U.N. Seabed Committee since it has been charged with preparations for the conference. The committee now has 91 members.

During these three meetings of the Seabed Committee, almost all members have indicated their general views. While the United States has not agreed with all the views expressed, the discussions to date indicate at least the broad parameters of a possible eventual agreement consisting of the following elements:

First, a 12-mile territorial sea, with freedom of navigation and overflight beyond that limit;

Second, coastal state economic controls over fisheries and seabed resources beyond 12 miles;

Third, an international regime for the seabed beyond the area of coastal state economic jurisdiction.

The key unsettled issues on which the success or failure of the 1973 Law of the Sea Conference will doubtless hinge are the following:

First, how far beyond 12 miles should coastal state economic jurisdiction extend and should it be exclusive or subject to international standards and accountability?

Second, free transit through and over international straits.

Third, the nature of the international regime and machinery in the area beyond coastal state economic jurisdiction.

Finally, the nature of the legal regime for the control of marine pollution beyond 12 miles.

With your permission, Mr. Chairman, I will be happy to supply the committee, for the record, with copies of certain statements we have made explaining our position on these key substantive issues in greater detail. However, in view of the widespread interest among developing countries in a 200-mile exclusive coastal state economic zone beyond the territorial sea, and the fact that some have included pollution control within this concept, I would like to outline our principal objections to such exclusive resource jurisdiction and to comment briefly on the pollution question.

First, let me make it clear that we are not opposed to delegating extensive controls over resources to coastal states in broad areas beyond the territorial sea as part of an agreed "Law of the Sea" settlement. However, it is our view that these controls must be based on an express delegation of authority from the international community, must take into account community interests, and must be accompanied by coastal state accountability to other members of the community. International standards and compulsory dispute settlement are accordingly essential. Exclusive coastal state economic jurisdiction tends to disregard the existence of international community interests in the area, particularly as regards other uses such as freedom of navigation, overflight, and scientific research. There is a danger that exclusive economic jurisdiction may be expanded to interfere with such other uses.

Secondly, fisheries are more than just an economic resource; they are a vital source of animal protein for the world. There is, accordingly, a community interest in assuring that coastal state regulation is accompanied by accountability to the community for conservation and for insuring maximum utilization of fisheries consistent with sound conservation practices. As a practical matter, there should be an agreed international formula regarding historic fishing activities of other nations in coastal areas.

Thirdly, fish do not observe arbitrary lines in the ocean. As a rule, fishing activity for particular stocks should be subject to the same management regime. Thus, coastal state regulation of coastal and anadromous species such as salmon should be based on the migratory habits of such species. Moreover, certain species of fish such as tuna are highly migratory, frequently crossing entire oceans. Accordingly, we believe such migratory species can only be effectively managed by international and regional organizations rather than by individual coastal states.

Fourthly, one of the important objectives of an international seabed regime is to provide for equitable sharing of benefits from seabed minerals. Most petroleum and gas resources are located in the continental margins off the coast. With few exceptions, these margins would be largely embraced by a 200-mile exclusive resource zone. Revenues for the international community as a whole from seabed minerals will not

be very meaningful unless payments for this purpose are made not only with respect to the deep seabed exploitation of hard minerals contained in manganese nodules, but also, at least in some measure, with respect to the exploitation of the petroleum and gas resources of the continental margin beyond the 200 meter depth line. It is estimated that approximately one-half of the offshore petroleum lies beyond the 200 meter depth.

Finally, we believe that minimum international standards for protecting other uses of the sea, as well as protecting the marine environment itself from pollution arising from seabed exploration and exploitation, are in the general interest, and that these should be applied to the continental margin beyond the 200-meter depth.

With respect to pollution, as I indicated a number of coastal states have urged that pollution jurisdiction should accompany coastal state resource jurisdiction in the area beyond a 12-mile territorial sea. This will doubtlessly continue to be an important area of discussion and negotiation.

First, let me indicate the areas where there seems to be general agreement. Coastal state jurisdiction over marine pollution emanating from land is clear. Moreover, it seems generally understood that coastal state economic jurisdiction over seabed resources, including such jurisdiction in an intermediate zone, will include coastal state controls over pollution from exploration and exploitation of such resources. The issue is the extent to which such coastal state controls should be subject to international standards, international inspection, and international dispute settlement, including minimum standards promulgated by the international seabeds organization for this purpose.

There is difficulty in dealing with the question of pollution from vessels. On the one hand, the interest of coastal states in protection from such pollution is clear. On the other hand, the international interests in freedom of navigation could be seriously compromised by coastal state controls over vessels and their movements in the interest of pollution control. Moreover, the fact that vessels by their very nature move over large distances tends to raise serious practical questions regarding the effectiveness and harmonization of different coastal state measures. At present, as I indicated, the Intergovernmental Maritime Consultative Organization, IMCO, is very active in the field of preventing pollution from vessels by agreed international arrangements, and has produced a number of conventions on the subject. With respect to IMCO's future activities in this area, at least two problems must be addressed:

First, the role of IMCO in continuing to develop international standards, and the extent to which this role needs strengthening to protect the interests of coastal states.

Second, whether additional measures for international cooperation in enforcement are desirable, and the extent to which these should involve IMCO, coastal states, or both.

If I could summarize, Mr. Chairman, what I have said about coastal state resource jurisdiction and related pollution problems, it would be that the existence of strong international and noncoastal interests must be taken into account in determining the nature and extent of coastal state controls, but that there need be no inherent or inevitable conflict between the two if the problems are addressed by all concerned with precision and in a spirit of mutual accommodation.

I propose to conclude with a review of last month's meeting of the Seabed Committee held in New York.

With respect to seabeds, the meeting was encouraging. Debate was structured, and tended to highlight the issues discussed earlier. A working group was established on principles that would form the first section of seabeds articles; additional working groups on machinery for the seabed regime are contemplated for the summer meeting in Geneva.

One disturbing element of the seabed discussion was the revival of the divisive issues inherent in the so-called "Moratorium Resolution" passed by the General Assembly in 1969 over the opposition of the United States and many others. That resolution purported to declare a moratorium on all exploitation of the seabed beyond the limits of national jurisdiction, without defining those limits. Among its other undesirable features, such a resolution encourages coastal states to expand their jurisdiction at the expense of the international area—and indeed, one of the strongest supporters of the resolution did just that.

We believe that the development of technology will not prejudice options regarding a seabeds regime if we proceed on schedule with treaty negotiations. Moreover, recognizing the need to preserve such options, the President stated in 1970 that all exploration and exploitation beyond 200 meters should be subject to the international regime to be agreed upon. Accordingly, it is to be hoped that the first subcommittee of the U.N. Seabed Committee will not permit itself to be diverted by attempts to revive the moratorium issue at the expense of constructive and timely work on the seabeds regime.

The second subcommittee, charged with the more traditional law of the sea subjects, spent virtually the entire session waiting for three regional groups to complete a proposal on a list of subjects and issues that would form the basis for discussion. It was introduced in the last week and contained certain unbalanced formulations that most, if not all, delegations must have known from the outset could not be accepted by others on a consensus basis. These formulations would, in effect, prejudice the ultimate resolution of the issues before substantive consideration of them was completed. Moreover, while certain delegations made very useful substantive statements in the subcommittee—particularly on fisheries—others seem to exclude the possibility of substantive progress on any issue in the subcommittee until the list has been agreed and there has been general discussion of the list as a whole and the respective priorities to be assigned for discussion of different subjects.

Since there is no substantial disagreement regarding the comprehensive nature of the list, but only regarding the wording of certain items, further work on the list should not be permitted any longer to impede substantive progress. Moreover, if possible a text of the list should be prepared in informal consultations prior to this summer's meeting so that it can be agreed at the outset of that meeting. The chairman of the Seabed Committee has agreed to arrange for such consultations. A copy of the proposed list, as well as the U.S. proposed amendments, will be submitted for the record.

Despite the unfortunate aspects of the list, a wholly negative interpretation is unwarranted. We now see more clearly the political parameters of the negotiation, and all delegations have a better under-

standing of each other's positions and the options available. This had to occur; what is unfortunate is the way it occurred and the amount of time involved.

The third subcommittee, charged with the subjects of pollution and scientific research, spent considerable time discussing the coordination of various international activities regarding marine pollution, and trying to identify the areas in which the Law of the Sea Conference could most usefully concentrate its efforts. Some delegations have been urging complete treatment of all aspects of marine pollution at the Law of the Sea Conference, including pollution from land-based sources. Others have emphasized the important responsibilities of other international organs in this field and have taken a more cautious approach to the scope of the Law of the Sea Conference in this regard.

Mr. Chairman, while the preparatory work thus far has not fully met our expectations, we remain convinced that these negotiations and the conference should continue on schedule. Technology is not standing still. Unilateral claims are proliferating. The essential element for success lies in the difficult political decisions that governments must make to reach agreement, not in technical work that can be completed expeditiously once such decisions are made. It is our view that delay will only increase the difficulty of reaching such decisions.

The oceans are not a remote and largely inaccessible part of the planet or the universe. They are an integral part of our entire existence. The interests at stake in resolving a new legal order for the oceans are diverse, immediate, and vital to almost everyone. If we can bring the collective will and collective procedures to bear on providing new and effective international law and international institutions for the oceans, this could well point the way to a new dimension in international relations and new confidence in the ability of the international community as a whole to come to grips with its most pressing problems.

Thank you, Mr. Chairman.

Mr. FRASER. Thank you very much, Mr. Stevenson. That was a very clear and helpful statement.

In the question period to follow I understand that both you and others at the table will respond as appropriate.

Mr. STEVENSON. Yes, Mr. Chairman.

Mr. FRASER. In the Secretary of State's most recent foreign policy report it stated that in proposing draft treaty articles on a 12-mile territorial sea and free transit through straits that the United States has indicated that a successful Law of the Sea Conference would have to fulfill the objectives of these articles. For the record would you differentiate between the currently accepted principle of innocent passage and the concept of free transit to which you referred in your statement?

Mr. STEVENSON. Yes, Mr. Chairman.

The current concept of innocent passage does not permit overflight by aircraft and requires submarines to transit on the surface. Moreover, although this was not a necessary implication of the term "innocent passage" as it was originally used, a number of states have come to take a subjective interpretation of innocent passage in the sense that they have alleged that it permits a state to determine on a subjective basis the innocence of the passage based on the cargo or destination or character of the vessel.

I think that I should also point out, of course, that the concept of innocent passage has been linked with the concept of the territorial sea, and that while free transit is different from innocent passage with respect to transit through what is conceded or agreed to be territorial waters, free transit is also a more limited right than the right of freedom of navigation that countries have enjoyed in the high seas generally. For example, as I pointed out in our statement, the United States has taken the position that there is a right of freedom of navigation in straits which are wider than 6 miles. Under the President's proposals, in straits between 6 and 24 miles wide, which would be overlapped by territorial seas with a 12-mile territorial sea, in effect we are urging a more limited right of transit through the strait where previously there was a right of freedom of navigation which would have permitted activities other than simply transiting.

We have been very careful to point out that we would not in any sense wish to suggest that states under a right of free transit would have anything other than the limited right to go from point A outside the strait to point B on the other side of the strait.

Mr. FRASER. Let's just focus on that last distinction. What could you do under the concept of freedom of navigation which will continue to apply outside of territorial waters that you could not do under the free transit concept?

Mr. STEVENSON. Well, there are a number of things that you of course could do. Under our draft articles we are talking about freedom solely for the limited purpose of transit, so that you would not be able to do anything that was not for the purpose of transit, whereas on the high seas generally a state can do what it wishes as long as it does not unreasonably interfere with other uses of the high seas by other countries. For example, you can conduct military maneuvers or exercises on the high seas but you could not do so when you are simply exercising a limited right of transit through a strait.

Mr. FRASER. That is fairly easily understood with respect to military vessels that might, as you say, be engaged in training exercises or some other kinds of——

Mr. STEVENSON. Well, for example, scientific research within territorial waters depends on the consent of the coastal state. On the high seas, you can conduct scientific research, again with reasonable regard for other people's uses of the high seas. We are not suggesting that there would be a right to conduct scientific research accompanying this right of free transit through international straits.

Mr. FRASER. That is what I was trying to get at, some illustrative activities that would be permitted under the concept of freedom and navigation that would also be permitted under the free transit. You have identified two. One might be scientific research; the other might be some kind of exercises by military vessels.

Mr. STEVENSON. There are other examples. A very simple one is just stopping in the strait. On the high seas there is nothing to prevent a vessel from stopping and lingering and doing what it wishes as long as it does not interfere with other uses. It would have no right in exercising a right of free transit through a strait to do that unless, for example, stopping was obviously necessary in terms of safety of navigation or something of that nature.

Mr. FRASER. Under the concept of free transit would it or could it be a prerequisite of the transit to first notify the country through whose territorial waters you were intending to proceed?

Mr. STEVENSON. We would not contemplate notifying because if such a requirement is introduced there is of course ultimately a risk of this leading to control of transit through straits.

Mr. FRASER. Moving then from free transit to innocent passage, you have indicated that one of the differences is that in innocent passage there is no right of overflight.

Mr. STEVENSON. No right of overflight by aircraft. Submarines would have to navigate on the surface.

Mr. FRASER. Now going beyond those two restrictions, is there any limitation under the current concept of innocent passage with respect to the question, for example, of possible pollution? Suppose a large oil tanker were proceeding on the basis of innocent passage and the country whose territorial waters were being perversed feared that for some reason there might be a significant danger of pollution. How does the present concept of innocent passage interact with that concern?

Mr. STEVENSON. We are very much concerned, Mr. Chairman, and appreciate very much the problems of navigational safety and pollution risks in international straits which mostly come from navigational safety problems. It is our view that the appropriate answer to this problem is through appropriate objective international arrangements and not through some application of the innocent passage concept to establish particular rules for particular straits. This is a very real problem but in our view it is not a problem that is limited to straits; it is a problem that applies to congested maritime areas generally.

Therefore, while we appreciate this problem, we feel that innocent passage concepts, particularly in the subjective application of this concept, are in effect carried further in order to deal with pollution in the way that a particular coastal state would like to do so. We don't think that is a satisfactory answer, either from the standpoint of the coastal state or from the standpoint of the international community.

Mr. FRASER. You referred both earlier and now to the fact that our subjective standards are being sought to be applied by the country to the innocent passage whose waters are being traversed. To what extent have these subjective considerations actually been brought to bear in controlling or regulating innocent passage?

Mr. STEVENSON. I think to a certain extent it has been more a question of talking about doing this in the future than actual implementation to date, although we have already some indications in some areas that coastal states are going to apply their own standards to limit certain passages and take the point of view that the strait states as such, without any involvement of users, can decide what the rule should be. Now of course you did have a comparable problem in the Middle East in 1967.

I might ask Mr. Carter, since some of these questions bear on Department of Defense considerations, if he would like to supplement what I said.

STATEMENT OF JARED CARTER, OFFICE OF OCEAN AFFAIRS, DEPARTMENT OF DEFENSE

Mr. CARTER. Well, I just would point out one striking example was the control over the straits leading into the Gulf of Aqaba prior to the June 1967 war in which the determination was made that the passage of a commercial vessel containing commercial cargo was not innocent because it was bound for Israel. There are other examples of several countries claiming that warships do not have a right of innocent passage even through the international law on the subject seems quite clear to the effect that they do have a right of innocent passage. I would not be able now to catalog all of those instances of states asserting that warships don't have a right of innocent passage but there are a considerable number of them.

Mr. FRASER. And your view is that if the concept of free transit is agreed upon that any constraints that would be exercised with reference to pollution control and so on should have an international origin or comply with international standards rather than being unilaterally asserted by the country with the territorial rights?

Mr. STEVENSON. Yes, Mr. Chairman. We feel that the approach should be international. Obviously we have not yet reached the point of being able to agree on what the details of such an arrangement might be. What we are concerned with clearly is not interfering with the substance of the right of free transit, but obviously we are prepared to discuss ways of setting up appropriate international standards which will take into account coastal state interests.

Mr. FRASER. What has been the response in the preparatory meetings? What do some of the other countries think about the free transit concept?

Mr. STEVENSON. I think with respect to that, Mr. Chairman, I would have to distinguish at least three groups of states. We have received support from other maritime states such as the Soviet Union, the United Kingdom and others as well as from a small number of developing countries such as Argentina, Ethiopia, and Singapore. We have received opposition from Spain and a number of other straits states. We do not feel that we have yet had an opportunity to explore with the straits states as fully as we would like to do so the ways of accommodating their concerns regarding pollution and navigational safety fields.

In addition to these two groups there are a great many developing countries which are not straits states and which may perceive no direct interest in straits in their own country as such. Many of these countries clearly have an interest, in terms of delivering their own exports, in the principle of free transit and in protecting their commerce from restraints that could make it more costly or be disruptive.

Not too many of the countries that are neither straits states nor presently maritime states have taken a position. Obviously, as in any international negotiation, this is one of the elements of a package and of course it is quite clear that this is something that is important to us, and that fact is appreciated by other countries.

Mr. FRASER. Mr. Gross.

Mr. GROSS. Thank you, Mr. Chairman.

Mr. Stevenson, I take it you are schooled in international law or maritime law or both? What is your background?

Mr. STEVENSON. My background, sir?

Mr. GROSS. From a legalistic standpoint.

Mr. STEVENSON. I spent a year teaching international law and 20 years in the practice of law, including international law. I was once the president of the American Society of International Law. I have been the legal adviser of the State Department for 3 years.

Mr. GROSS. Practiced maritime law as well?

Mr. STEVENSON. I did not practice much maritime law as such.

Mr. GROSS. I regret that I got here a little late, but from listening to your statement and reading some of it I get the impression that you have not made much progress. Am I right in this impression?

Mr. STEVENSON. Well, I think——

Mr. GROSS. I don't mean you personally; I mean negotiators on behalf of this country.

Mr. STEVENSON. I think, Mr. Gross, that this is probably one of the most important, yet I think most difficult, international negotiations that this country is facing because it does involve the interests of every country in the world. It is not an area where many countries at the present time have no interest; they all have substantial interests involved. It obviously is a difficult problem to try to find the necessary principles that will bring about general agreement, but I am not discouraged.

The educational process has advanced a very great deal from the time we basically started about a year and a half ago. Although the Seabeds Committee of the United Nations for some 4 years has been dealing with the problem of the seabeds, it was not until the General Assembly in December of 1970 decided to call a comprehensive Law of the Sea Conference that countries began to address the issues in the context of arriving at an international agreement.

Mr. GROSS. You didn't really expect very much from the United Nations in the first place, did you?

Mr. STEVENSON. Well, Congressman Gross, I think that this can be one of the areas in which the countries comprising the United Nations can make most progress. In some respects it is like the problem we had with civil aviation. Here is a functional problem that in many ways requires a generally agreed solution; it is terribly important to have basic legal rules in this area.

It is a tremendous problem. But, if we cannot make progress in this area, we are going to hurt not only the United Nations but international law and all our international relations generally. On the other hand, if we can make progress in dealing with these functional problems, I think perhaps it can lead to a better atmosphere and a more businesslike procedure in other areas.

Mr. GROSS. Well, that is just fine. Again I have not gotten an answer to my first question about whether you really think you made any progress. As far as the United Nations is concerned, the only thing that I have found they have agreed upon in many years is the fact that they are bankrupt and need more money. They all seem to agree on that, but beyond that, I don't know of much, if any, accomplishment on the part of that debating society. I suppose you have to string along with it hoping for the best and fearing the worst.

What about the moratorium resolution? You say in your statement on page 12 that one of the strongest supporters of the resolution did

just that—in other words, claimed jurisdiction. What country extended jurisdiction? What country are you talking about in that case?

Mr. STEVENSON. I was talking about Brazil, which extended its territorial limits to 200 miles shortly thereafter.

Mr. GROSS. I thought you were perhaps speaking of Chile but it is Brazil that last year extended, or did they actually announce that they were extending their territorial limits?

Mr. STEVENSON. In the spring of last year.

Mr. GROSS. Last year?

Mr. STEVENSON. 1971.

Mr. GROSS. I knew they contemplated it; I didn't know they had served notice on the rest of the world that they had extended their territorial limits.

Mr. STEVENSON. They did.

Mr. GROSS. 200 miles.

What are some of the other current developments in the U.N. Committee that may further delay perhaps a 1973 convention or delay any real accomplishment on the part of the so-called convention?

Mr. STEVENSON. Well, I think in the first place there is clearly a real educational problem here. You asked me before whether I thought we had made progress. We cannot make any progress until countries are able to appreciate what the problem is. Obviously there is always going to be a certain amount of suspicion in this area, so I think we have made progress in terms of countries beginning to identify their interests and beginning to see that it is important to everyone to have a solution. It is not just a question of developed versus developing countries, but having certain minimum standards is the only way that you can accommodate the very real interests of all sides.

Mr. GROSS. Well, is there to be a 1973 meeting, and if so, where and what do you anticipate will come out of it? More moratorium resolutions or what do you anticipate?

Mr. STEVENSON. Well, the General Assembly in December 1970 in fact did call a conference for 1973, but next fall's General Assembly can decide to postpone that Conference if they think there has not been sufficient progress. At its recent meeting, the Seabeds Committee recommended to the U.N. Secretariat that it reserve a period of 5 weeks next spring and another period of 8 weeks in the summer which can be used either for the Conference or for more preparatory work, and I think that the General Assembly——

Mr. GROSS. You mean so the members can leave New York and go somewhere to a conference? Is this what you are saying?

Mr. STEVENSON. No decision has yet been taken as to where the Conference would meet. All other meetings to date have been either in New York or Geneva.

Mr. GROSS. Oh, I see. New York or Geneva. So you don't know whether there is going to be a 1973 meeting or not; is that correct?

Mr. STEVENSON. One has been called, but the General Assembly next fall has to decide the details.

Mr. GROSS. Is that because they don't have any money?

Mr. STEVENSON. No, it is because they want to see where we stand. As far as the United States is concerned, we are very anxious to go forward with the Conference.

Mr. GROSS. How much time does it take to determine where you stand?

Mr. STEVENSON. Well, I think that this summer session will be very important.

Mr. GROSS. Well, you don't know that you are going to have a summer session.

Mr. STEVENSON. Oh, yes, we will have a 5-week session this summer.

Mr. GROSS. Where?

Mr. STEVENSON. At the U.N. facilities in Geneva.

Mr. GROSS. Is that a pretty good summer climate over there?

Mr. STEVENSON. Well, it is better in the summer than in the spring.

Mr. GROSS. Better there than in New York?

Mr. STEVENSON. Well——

Mr. GROSS. Or Washington?

Mr. STEVENSON. That depends. For example, there are certain advantages in facilitating the attendance of more African representatives.

Mr. GROSS. Do you have to have some kind of a magnet to get the African delegates?

Mr. STEVENSON. It is less expensive for them to send people to Geneva than to New York.

Mr. GROSS. Are they worried about that? They are not in the U.N. Have you read that series of articles about the cocktail parties in New York and who some of the best entertainers are?

Mr. STEVENSON. I don't believe I have, sir.

Mr. GROSS. You ought to read it.

Are the Africans helping to speed this thing up or are they dragging their feet? Are the large countries dragging their feet or the smaller countries dragging their feet? Which is it?

Mr. STEVENSON. I think any generalizations are apt to be inaccurate. There are some African countries, I think particularly those that have gotten into this question and studied it, that realize it is very much in their interests to move forward. Other countries may feel more inclined to delay. I think as far as we are concerned, for the reasons I pointed out earlier, we think that there really is not too much of a choice. Unless we really move effectively internationally, there will be a continuing increase in unilateral claims and it will be increasingly difficult to deal with the problems. So we hope that the more countries are educated and understand the problem, the more they will all agree that an international solution is the only solution.

Mr. GROSS. Are these extended negotiations having any effect and if so what kind of effect upon offshore oil and gas developments of one kind and another, offshore airport building and so on, this sort of thing?

Mr. STEVENSON. Well, I think that clearly in order to have the sort of investment required for offshore mineral resource development, you need a stable legal regime. To the extent we can achieve such a regime, we will facilitate such development.

Mr. GROSS. That may be true but what is happening in the meantime to negotiations with respect to offshore oil development, and with respect to fisheries and so on and so forth? The industry of fishing, is anything happening as a result of these prolonged negotiations? Are plans being delayed and negotiations in those fields delayed? What is happening?

Mr. STEVENSON. Well, it has been our view that technology is going forward and therefore we think it is important that we arrive at an international solution as promptly as possible.

I think in the fishing area the fact that we do have a Law of the Sea Conference in prospect is to a certain extent a moderating influence. It enhances the possibility of arriving at practical interim solutions that look toward a more general solution later on. Perhaps the prospect that we had this Conference scheduled in 1973 made it easier to arrive at a tentative agreement with Brazil on fishing which is still, of course, subject to review by the two Governments.

Mr. GROSS. You mean that Brazil is going to miss the opportunity to seize our fishing boats as some other countries have been doing?

Mr. STEVENSON. I think, Congressman Gross, I cannot go into the details but we did announce 2 weeks ago that a tentative draft agreement with Brazil on a practical solution to the fishing problem had been submitted to both Governments for review.

Mr. GROSS. What is the overall organization? Is it the Intergovernmental Maritime Consultative Organization? In as few words as you can tell me, for my edification what is the determining organization insofar as we are concerned? Is this an international maritime consultative organization?

Mr. STEVENSON. No, Congressman Gross. What we are really talking about here is a problem that we would have whether or not we had the United Nations and whether or not we had IMCO. Basically what we have here is a multilateral negotiation among the countries concerned and the question of what sort of institutional structure——

Mr. GROSS. Who composes the International Governmental Maritime Consultative Organization? Of what is that composed?

Mr. STEVENSON. Well, this is composed of a number of countries, maritime countries and others, that are interested in developing conventions dealing with navigational problems. They have been particularly active recently with respect to the question of oil pollution from vessels.

Could I finish my answer to your first question?

Mr. GROSS. Sure.

Mr. STEVENSON. What we are trying to arrive at here are general rules for the ocean that would be needed whether or not we had the United Nations and whether or not we had any particular institutional structure. We are trying to arrive at this through the only process we have since we don't have a legislature internationally—agreed rules to govern 70 percent of the world where we just don't have such agreement now.

Now the question of what sort of institutional structure we are going to be able to use most effectively with this set of international rules is a separate question. In fact many countries, and particularly our own, have suggested that perhaps it is better that this institutional structure not be an integral part of the United Nations, that it be separately constituted. So this is not necessarily a United Nations question.

Mr. GROSS. Well, what timetable do you forecast for the ratification of the treaty?

Mr. STEVENSON. This will of course depend very much on what sort of requirements are imposed as to how many countries must ratify before it becomes effective. I think this will——

Mr. GROSS. I guess I will quit beating my wife, I don't know. You have no timetable for ratification?

Mr. STEVENSON. It is not enough to get a treaty adopted at a conference. It still is not effective law until it has been ratified by a sufficiently large number of countries so that it comes into effect. It is very important not only to get it adopted at a conference but to have it become effective.

Now in the past it has taken quite a number of years in some cases to get the number of necessary ratifications, but I think the international community has got much better in this respect. We had a problem on hijacking. The original treaty dealing with hijacking, the Tokyo treaty, took 3 or 4 years to come into effect.

Mr. GROSS. How long have you been at this?

Mr. STEVENSON. I am sorry.

Mr. GROSS. How long have you been at this?

Mr. STEVENSON. Well, we have only been at this really—the first meeting was in March of 1971.

Mr. GROSS. How much money have we spent on it?

Mr. STEVENSON. Well, I could not give you the exact figures.

Mr. GROSS. Well, how much has Congress appropriated? Do you have any idea?

Mr. STEVENSON. I don't think that there has probably been a separate allocation but I will be glad to try to supplement the record in that respect.

Mr. FRASER. Are you not able to draw on the general appropriation providing for international conferences?

Mr. STEVENSON. Yes, it is part of the general so I don't know if they could break it down.

Mr. FRASER. There has not been other than incidental?

Mr. STEVENSON. No, this is part of the international conferences appropriation of the State Department budget.

Mr. FRASER. Do we pay the salaries of any delegates especially for this purpose?

Mr. STEVENSON. No. At the present time we have no individuals who are not part of some Government agency. I happen to be the chairman of the Law of the Sea Task Force which has representatives of the agencies concerned. All of the gentlemen at this table are part of that task force, but as yet we have not set up a separate organization that does nothing but this conference.

Mr. GROSS. I guess that is all.

Mr. FRASER. Mr. Stevenson, let me just finish with a few questions on the straits problem and then I would like to move to the resources.

My understanding is that traditionally there are only about half a dozen straits in the world that have been regarded as important strategically. Is there an option at least for us and perhaps for other major maritime countries to deal through bilateral arrangements with countries so that the free transit concept would not necessarily be essential to preserve our freedom of movement?

Mr. STEVENSON. I think the difficulty with that approach, Mr. Chairman, is that even if you were to assume, which I do not believe is the case, that at the present time we could have that sort of bilateral

arrangement with respect to all the straits that are important to us or may become important to us, there is no way of insuring that such bilateral arrangements will continue, whereas if you have agreed international principles you are not dependent on a continuing bilateral relationship.

Mr. FRASER. I understand that last November Malaysia and Indonesia issued a joint declaration declaring that the Malacca Straits were not an international waterway, based apparently on their territorial limit of 12 miles from each side which would eliminate free transit. Has that had any practical effect on the movement of vessels?

Mr. STEVENSON. It has had no practical effect so far.

Mr. FRASER. Has either country altered its position since that time? In other words, is there any change from the time they made the declaration?

Mr. STEVENSON. I don't believe there has been any change in terms of rules applicable to the strait.

Mr. FRASER. What has been the position of the People's Republic of China on this question?

Mr. STEVENSON. The People's Republic of China of course participated for the first time in the discussions at the last session and made some very general statements, including association of our interests with those of the Soviet Union. I do not recall that they made any express statements on the straits question.

Mr. FRASER. Now just turning for a moment to the resources question I understand that on the last day of this last Preparatory Conference Kuwait introduced a new resolution calling for a moratorium on the exploitation of seabed resources pending the establishment of an international regime.

Where does that resolution stand and does the United States have a position on it?

Mr. STEVENSON. As I mentioned in our statement, this resolution is not unlike a resolution which the General Assembly considered in 1969 which we voted against. As I indicated, we are concerned that if this issue is discussed again at great length, this will prevent progress toward arriving at an agreed international solution to this problem. We don't feel that this sort of resolution is the way to deal with the problem.

Mr. FRASER. Well, is there not some value though in having countries refrain from unilateral extensions or claims that there is an international agreement? In that sense isn't a kind of status quo arrangement desirable so as not to aggravate the problems of reaching an agreement?

Mr. STEVENSON. I think that our position was indicated in the President's 1970 statement. We feel that the international community's options can be protected by making it clear that anything that is done in this area should be subject to the international regime that is to be established. On the other hand, we don't think it is justifiable pending the establishment of that regime, to say that no activity can go on.

Mr. FRASER. Well, a part of the resolution as I have it in front of me would assert that, and I am quoting now:

> All arrangements made or to be made for the commercial exploitation of the resources of the area prior to the establishment of the regime shall have no legal validity and shall not form the legal basis with claims to any part of the area or its resources.

Would that statement be consistent with our position that any exploration or commercial activity that is carried on would be fully subject to the establishment of the international regime and that no prior rights could be asserted that would carry forward?

Mr. STEVENSON. Well this, of course, will depend on the nature of the international regime that is ultimately established. In the proposals that we have made thus far we did contemplate certain interim type arrangements which would let technology move forward but which would, in effect, provide for protecting the international community's interest by requiring conformity to the provisions that were included in this regime. Now obviously this is also a question of what time frame we are talking about.

Mr. GROSS. Would the gentleman yield?

Mr. FRASER. Yes.

Mr. GROSS. Do I understand you support an extension of the territorial limits of the United States to 12 miles at sea?

Mr. STEVENSON. We are willing to accept a 12-mile territorial sea if we can get general agreement on that and also get agreement to free transit through international straits.

Mr. GROSS. What happens then to the offshore oil and gas rights insofar as the coastal States of the United States are concerned? Would those States get 12 miles under those circumstances?

Mr. STEVENSON. Well, Congressman Gross, in some cases the present situation with respect to the Continental Shelf is distinct from the question of the territorial sea generally because we are a party to the Continental Shelf Convention which gives coastal states rights beyond 3 miles out to at least 200 meters. Now the question of the respective rights of the States and the Federal Government is something that has been in litigation and is in litigation today.

I think it has been generally the position of the Federal Government that the States' rights were limited to 3 miles, except in the case of some of the Gulf States which had a different historic situation. So the answer to your question would be that the increase would result in increased Federal as opposed to State jurisdiction.

Mr. GROSS. Did Texas get 12 miles or 10 or what? Do you know?

Mr. STEVENSON. I believe Texas got 9 miles.

Mr. GROSS. Nine miles?

Mr. STEVENSON. Yes.

Mr. GROSS. They wanted 12, didn't they?

Mr. STEVENSON. I think that is right, sir.

Mr. GROSS. If I remember the act that was passed under the Truman administration—and, I believe, he vetoed, didn't he?

Mr. STEVENSON. I don't recollect.

Mr. GROSS. I supported his veto, one of the few times I voted for him or with him.

I can tell you one thing. I am not in favor of giving the coastal states the right to offshore resources 12 miles out. Nor am I in favor of turning those resources over the the United Nations or any other—we have a new international organization budding and coming out of this committee. I don't know when Mr. Fraser is going to get it to the House floor. The World Federalists want federal recognition organization, and one world government. I am not in favor of surrendering any of our sovereign rights to any country anywhere around the world, big or little.

Thank you.

Mr. FRASER. As I understand our problem, it is to define sovereign rights at this point.

Mr. STEVENSON. That is one of the key problems. Of course the area that you and I were talking about is the area beyond, and of course in the past there has been no agreed regime at all for that area.

Mr. GROSS. The area beyond what?

Mr. STEVENSON. Beyond national jurisdiction.

Mr. GROSS. Well.

Mr. STEVENSON. I don't think there is any difference between the Federal Government position and yours, Congressman Gross. I think it is likely to be the Federal Government's position that beyond 3 miles it should be Federal as opposed to State jurisdiction except where there have been——

Mr. GROSS. Texas originally claimed 10 or 12 miles. One of the Texas Members of the House, questioned about this, said they could shoot their old cannon balls 12 miles. Of course that was an impossibility with the guns they had in the days when Texas was a territory, but the answer to that by this Texan was that they always shot their cannon with the wind.

Mr. POLLOCK. Mr. Chairman.

Mr. FRASER. It seems to me that gives you a new basis for determining that.

Mr. Pollock, former Congressman.

STATEMENT OF HON. HOWARD POLLOCK, DEPUTY ADMINISTRATOR, NATIONAL OCEANIC AND ATMOSPHERIC AGENCY

Mr. POLLOCK. Mr. Chairman, I would like to make several remarks in response to some of the queries of my distinguished former colleague. First the decision internationally in which the United States is engaged is completely separate and apart from whatever rights any coastal state would have to so-called U.S. waters or territorial waters and I think this would depend on amendments to the Submerged Lands Act.

Mr. GROSS. But you know, Howard, that would be the first thing with which we would be confronted.

Mr. POLLOCK. It may be but it is quite a separate problem from the situation we are facing here.

Mr. GROSS. I know.

Mr. POLLOCK. I would like to go back to respond to your opening query. I think no one sitting at this table and Mr. Carter from Defense or Mr. Stevenson from State or Mr. Ratiner from Interior and in my case from the Commerce Department have any illusions about the difficulty with which we are confronted in the United Nations in this whole problem of the law of the sea; it is very, very difficult.

We have 91 nations, including Red China, and I suppose if you had 91 people from one church in one city in one State and in this one nation you would never get a total agreement. It is a very complex thing and of course we have so many diverse interests. We have land locked and shelf locked countries versus those that have access to the sea. We have the developing nations versus the developed ones. We have those with high technology versus the others that do not, those

that have long distance fishermen and merchant fleets versus those that do not.

So there are many problems but I think the answer, and certainly Jack Stevenson alluded to it before, is that the alternative is quite a bad one. If every nation simply unilaterally made decisions on extending and claiming parts of the ocean without any kind of an international forum to constrain this, ultimately somewhere between 30 and 50 percent of what is now the general seas of the high oceans of the world would be taken up by claims of nations and we think that this is a very bad thing for strategic military purposes, for commercial purposes, for our distant water fishermen, for the mining interests. So what we are attempting to do under very difficult circumstances is to try to arrive at some international agreement or consensus on how we can resolve this on some kind of a uniform basis and still have the right of freedom of transit through the straits.

Mr. GROSS. Some of the Latins are doing that by claiming 200 miles at sea.

Mr. POLLOCK. And we disagree with this.

Mr. GROSS. I hope you would.

Mr. FRASER. Mr. Stevenson, perhaps we could go back to the 1969 Federal Assembly resolution which sought then to declare a moratorium.

First, they sought to declare a moratorium beyond what point?

Mr. STEVENSON. Well, this was one of the difficulties. They simply said beyond national jurisdiction and they didn't say how far national jurisdiction extended so obviously to a certain extent this could motivate claims of national jurisdiction to a considerable extent beyond then existing limits because then there would not be any problem with the resolution.

Mr. FRASER. There had been this understanding that there was a right to exploit seabed resources up to the 200 meter limit.

Mr. STEVENSON. Coastal state sovereign rights, exclusive rights.

Mr. FRASER. Exclusive rights. But to the seabed, not to the whole of the waters.

Mr. STEVENSON. That is correct.

Mr. FRASER. Just to the seabed. Now what relationship did that concept have to the 1969 resolution?

Mr. STEVENSON. Well, I think the concept of the resolution was that it would apply in the area beyond 200 meters or however far beyond 200 meters coastal states had a right under the 1958 Convention to exercise their jurisdiction. You see, one of the problems with the 1958 Convention was that it was perfectly clear that beyond 200 meters, coastal states had a right: it went on to use language that in the adjacent waters beyond 200 meters out to where exploitation could take place the coastal state also had rights, and there has been no agreement as to where that further limit would be.

In any event, leaving that aside for the moment, the idea was that accepting that there was some point beyond which national jurisdiction could not extend, there should be no exploitation pending establishment of the regime in the seabed area beyond national jurisdiction. The seabed area beyond had been regarded as subject to the regime of the high seas, and the general freedom of the seas principle is that anyone may use the high seas as long as he does so with reasonable regard to uses of the high seas by others.

In other words, the resolution was an attempt to say you can't exercise a high seas right in the area beyond national jurisdiction.

Mr. FRASER. Let me see if I understand it. In other words, the 1969 resolution sought to curtail national activity beyond what, the 200 meter depth?

Mr. STEVENSON. Beyond wherever national jurisdiction ended. But I think the point here is that it is not effective in curtailing coastal state activities under claims to coastal state jurisdiction, because in fact the coastal state merely extends its national jurisdiction and the resolution applies only in an undefined area beyond national jurisdiction. It was, on the contrary, an attempt to restrict all countries of the world from using their high seas rights in the area beyond.

In other words, before that time, in the seabed area beyond national jurisdiction the basic principle involved was the freedom of the seas principle. The resolution was an attempt to curtail that, and is not an attempt to curtail coastal State claims to exclusive jurisdiction.

Mr. FRASER. Now we voted against that?

Mr. STEVENSON. We did.

Mr. FRASER. What was the vote; do you remember?

Mr. STEVENSON. It was slightly in excess of two-thirds. However, there were significant negative votes and abstentions.

Mr. FRASER. Now what is our view of the legal effect of that?

Mr. STEVENSON. We have indicated that we regarded it as a recommendation to be taken into account, but without binding legal effect.

Mr. FRASER. Is our position based on the idea that the General Assembly even with a two-thirds vote does not have the authority to fasten the binding arrangement on the world community?

Mr. STEVENSON. That is correct.

Mr. FRASER. Is there any dispute about that interpretation?

Mr. STEVENSON. There are countries that take different points of view on that question and there are also differences in points of view as to whether a particular recommendation is itself merely evidence of what is already the law or an attempt to impose a new law.

Mr. FRASER. Just a moment further. Are there persons expert in international law who would argue that it does have a binding effect?

Mr. STEVENSON. There are some who so argued and of course it can depend on the particular recommendation. Obviously, the U.N. General Assembly, with respect to certain matters, is given under the charter the right to make binding decisions, certainly with respect to a number of the housekeeping matters, election of officers, and things of that nature. We also took that position with respect to the Namibia mandate because in that area the General Assembly was acting as a successor under the League of Nations mandate, but that with a different kind of action from one like this.

Mr. FRASER. Now turning to what is actually happening, are there activities going on involving a license or permit or some grant of authority from the U.S. Government to any of our commercial enterprises that would come within the alleged prohibition of the 1969 resolution?

Mr. STEVENSON. Dr. Vincent McKelvey, who is the director of our Geological Survey in Interior, reported to the Seabeds Committee that

as far as the deep seabeds are concerned, activities have been largely exploratory in nature, largely in the area of developing technology. There has not been commercial production as such with respect to the mining of manganese nodules from the deep seabed. There have been statements that this could be expected by the end of this decade, but to date there has not been commercial production as such.

Mr. FRASER. Now on the assumption that a commercial enterprise wanted to proceed with the exploitation of nodules on the abyssal floor bed, which would fall outside of our claim of exclusive national jurisdiction, would such an enterprise require any kind of a license or permit from our Government?

Mr. STEVENSON. It has been our position in the past that since this was an exercise of a high seas right, no license or permit as such would necessarily be required. Now obviously there are certain other considerations, some of which as you are undoubtedly aware are involved in some legislation that has been introduced in both the Senate and the House looking to certain protection of U.S. interests and doing certain other things. I would prefer since we are considering this legislation within the executive branch not to comment on it further because we still have not reached a conclusion about it.

(A copy of the executive branch position on this legislation in the form of a letter to the Senate Interior Committee was subsequently submitted for the record and follows:)

DEPARTMENT OF STATE,
Washington, D.C., May 19, 1972.

Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In response to your letter of January 12, 1972 and in accordance with our interim reply of January 21, 1972, this letter presents the views of the Executive Branch on S. 2801, "A bill to provide the Secretary of Interior with authority to promote the conservation and orderly development of the hard mineral resources of the deep seabed, pending adoption of an international regime therefor."

Fundamental to the President's Oceans Policy, announced in his May 23, 1970 statement, is the desire to achieve widespread international agreement on outstanding Law of the Sea issues, in order to save over two-thirds of the earth's surface from national conflict and rivalry, protect it from pollution, and put it to use for the benefit of all. It is central to all our national interests involved in the Law of the Sea Conference that the world agree on a treaty which will properly accommodate the many and varied uses of ocean space, including the seabeds. Negotiations have been actively underway in the UN toward this end since March, 1971.

To date, the progress of preparatory negotiations has not met our expectations. It appears to us that many nations share our view that an early conference which will produce a widely acceptable treaty is in mankind's best interest. Nevertheless, the UN Seabed Committee has been so far unable successfully to cope with some of the obstacles that have been placed in its path by relatively few countries.

As you know, at the 24th General Assembly in 1969, a resolution commonly known as the "Moratorium Resolution" was passed despite significant "no" votes and abstentions. The Resolution purports to prohibit exploitation of the resources of the area of seabed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, pending the establishment of an internationally agreed regime for the area. The United States is not legally bound by this Resolution, although it is required to give good faith consideration to the Resolution in determining its policies.

In his May 23, 1970 Oceans Policy Statement, President Nixon indicated that it is neither necessary nor desirable to try to halt exploration and exploitation of the seabeds beyond a depth of 200 meters during the negotiating process. He

also called on other nations to join the U.S. in an interim policy and suggested that all permits for exploration and exploitation of the seabeds beyond 200 meters be issued subject to the international regime to be agreed upon. He stated that the regime should include due protection for the integrity of investments made in the interim period.

At the end of the March, 1972 meeting of the UN Seabeds Committee, Kuwait, supported by 13 countries, proposed a "draft decision" which would have extended the Moratorium Resolution to all activities aimed at commercial exploitation. This "draft decision" has been deferred for discussion to the July meeting of the UN Seabeds Committee. The introduction of the "draft decision" followed criticism of S. 2801 (identical to H.R. 13076) by a number of countries both on the grounds of the Moratorium Resolution, and because of potential prejudice to the Law of the Sea negotiations. Inherent in this situation is the potential for a renewed debate which could both delay and adversely affect the atmosphere for progress toward a timely Law of the Sea treaty that would solve the difficult and complex issues under negotiation in an equitable manner.

We do not wish to make the treaty negotiations more difficult. Issues such as those raised by the "draft decision" put forward by Kuwait, should not be allowed to disrupt these negotiations.

By the same token, it is neither possible nor desirable for the U.S. and other industrially advanced countries to inhibit technological growth. We are a major consumer of the metals which will be derived from manganese nodules found on the deep ocean floor. We are also in need of new supplies of energy. However, our hopes for the success of these negotiations dictate that we approach the question of interim mining cautiously. We must consult with other countries—those whose nations, like ours, are beginning to pay serious attention to the commercial possibilities of seabed mining—and those countries whose long-range Law of the Sea objectives might be deleteriously affected if deep ocean mining begins under a unilaterally established regime. A timely and successful Law of the Sea Conference will depend on the willingness of many countries to accommodate each other's objectives.

The General Assembly has already decided to convene the Law of the Sea Conference in 1973, subject to review at this fall's General Assembly session. Thus, if there is progress in the Committee and the Conference is held as scheduled, there would appear to be reasonable prospects for achieving timely multilateral agreement.

For these reasons we are not prepared at this time to state a position on S. 2801. We realize, however, that we cannot indefinitely postpone doing so on legislation of this type and we will watch the developments in the summer session of the UN Seabeds Committee and the UN General Assembly session this fall very closely, and consult with other nations on this matter and with industry and other interested members of the public, in order to help us evaluate our position. We will report to you again on this matter in the fall.

The Office of Management and Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report.

Sincerely,

JOHN R. STEVENSON,
Chairman, Interagency Law of the Sea Task Force and Legal Adviser.

Mr. GROSS. How far out does New York haul its garbage before they dump it? Do they do this without authorization of the Federal Government?

Mr. STEVENSON. They have in the past, but this particular problem you are talking about is one that we are very much concerned with. There has been some dumping legislation under consideration and there is also a proposed treaty relating to dumping where we are attempting to control dumping through control in the port from which a vessel that plans to dump leaves. This is one of the areas where I think we are going to get some answers pretty quickly.

Mr. GROSS. How far out do they go now, do you happen to know?

Mr. STEVENSON. I believe it is somewhat beyond 12 miles but I am not sure.

Do you remember, Jared?

Mr. CARTER. No.

Mr. GROSS. Does that account for the high water in the Atlantic?

Mr. STEVENSON. Well, certainly there has been a problem in that area, Congressman. We are all appreciative of that.

Mr. POLLOCK. Mr. Chairman, I just wanted to respond to your question before with Jack. I think generally any legislation which would come before the Congress would really be to protect one company from another company within the United States rather than giving them any kind of an international authority. But as Jack says, we are trying to consider a number of the measures now within the administration; one of them is S. 2801 and the other in the House is H.R. 13076. I think on the high seas I would assume that it is the general feeling of the United States that they would have freedom to do what they want subject to any international agreement we might enter into.

Mr. FRASER. I understand that you have the question of the legislation under study now by the executive branch and I am not trying to push you for it. You cannot give me the answers today, but I am trying to find the legal context in which the whole issue arises.

As I understand what you are saying, in the absence of legislation a company out in the deep seas or beyond our claim of national jurisdiction at the present time can go unrestrained insofar at least as our Government is concerned.

Mr. STEVENSON. Subject to reasonable regard for other uses of the area.

Mr. FRASER. But that is their problem; that is not our Government's problem.

Mr. STEVENSON. We are concerned that our citizens do comply with the international law requirement of reasonable regard for other uses.

Mr. FRASER. But from what Mr. Pollock says, a part of the reason that legislation is being proposed is to identify the relative rights of commercial ventures which might come into conflict with one another.

Mr. POLLOCK. Domestic.

Mr. FRASER. Yes.

Mr. STEVENSON. If I could be completely clear on it, I think that I should refer to a letter I wrote to the Interior Committee of the Senate that as far as the international situation is concerned we feel that there is a right pending establishment of an international regime to exercise high seas freedoms. The question of the U.S. control over its citizens in this particular exercise of the high seas freedom is not all that clear. Obviously there are many areas where we control. Obviously it depends how they do it. We have control over our flag vessels throughout the world. But this is a new problem, and although we feel the international side of it is clear, it is not that clear what the domestic legislative side of it is.

Mr. FRASER. Well, presumably if we enacted legislation we could control the activities.

Mr. STEVENSON. We certainly could because we are able to control the activities of our nationals wherever they may be. There is jurisdiction based on nationality throughout the world.

Mr. FRASER. Now just to make sure I understand, the moratorium of 1969 voted by the General Assembly and presumably the resolution by Kuwait that I referred to earlier do not deal with any exercise of

rights that we would claim lie within our national jurisdiction. They are not purporting to restrict the rights that may flow from the 1958 convention but only activities that would fall ouside of the 1958 convention, wherever that line happens to be.

Mr. STEVENSON. It depends which 1958 convention. They are not purporting to restrict coastal state exclusive sovereign rights with respect to resource exploitation under the 1958 Continental Shelf Convention. They are purporting to restrict all states' exercise of rights in the area beyond that coastal state jurisdiction. They are in effect attempting to regulate high seas rights.

Now there is a dispute obviously as to the extent of high seas freedoms, but they are purporting to restrict what we believe are our existing legal rights under high seas principles.

Mr. FRASER. Taking it a step further, in the absence of legislation, if the U.S. national goes out into the deep seas and he begins to mine nodules, then they might run into an argument with someone else whose position might be grounded on the U.N. General Assembly action of 1969 and then somebody might have to adjudicate that conflict.

Mr. STEVENSON. Yes.

Mr. FRASER. All right. I can understand that. But supposing now the United States were to enact legislation that specifically licensed or purported to affirmatively give nationals a right or to confirm it, then that legislation would appear to come up against the 1969 General Assembly resolution. Is that right?

Mr. STEVENSON. Yes. Of course, in addition to the moratorium problem, you could have the problem of a conflict between our nationals' use of that area and use of that area by nationals of another state. Then you would have the traditional question of accommodation of uses under the reasonable regard principle applicable on the high seas.

Mr. FRASER. I understand that but if we were to enact legislation that, in a sense, affirmed the right of a U.S. national to go out in the deep seas, that legislation on the face of it would appear to run against the 1969 General Assembly action. Is that so?

Mr. STEVENSON. There would be certainly a conflict between that and what the resolution purported to do.

Mr. FRASER. And is it also fair to say that there is substantial sentiment in the international community that the exercise of rights in these deep sea areas in the face of the 1969 resolution might increase the difficulties of the international regime? I am not asking for your opinion but only as to what others think.

Mr. STEVENSON. Certainly a number of statements to that effect were made both in 1969 and more recently.

Mr. FRASER. Presumably these are among the considerations that the executive branch is looking at in attempting to evaluate.

Mr. STEVENSON. We are undertaking comprehensive consideration of the effect of this legislation.

Mr. FRASER. Well, there are more questions that we could go into but I think this is a good beginning today and I think you have done a good job of identifying the progress in the talks. There appear to be substantial problems that have yet to be solved but we hope to provide a continuing forum here if we can, to identify these issues.

Mr. STEVENSON. It would be very helpful to us and we welcome it.

Mr. FRASER. Well, thank you very much.

Do you have any further questions?

Mr. GROSS. No further questions.

Mr. FRASER. I didn't mean to cut off any of the other witnesses here. Any comments on any of these points that we have covered?

Well, thank you.

At this point without objection we will place in the record a statement of the proposed Law of the Sea Conference by Robert Cory on behalf of the Friends Committee on Legislation.

(The statement follows:)

STATEMENT OF ROBERT CORY ON BEHALF OF THE FRIENDS COMMITTEE ON NATIONAL LEGISLATION

My name is Robert Cory. I am director of William Penn House, a Quaker Center in Washington, and a consultant on United Nations Affairs for the Friends Committee on National Legislation. I am testifying today on behalf of the Friends Committee on National Legislation. While this Committee is widely representative of Friends throughout the United States, it does not attempt to speak for all Friends.

The concern for the peaceful development of the resources of the deep seas is, however, closely related to the Quaker's historic testimony on behalf of world order and justice. Whatever the diversity of views among Quakers on the means of achieving peace, there is a wide consensus on the need for strengthening institutions which express the principle of the worldwide brotherhood of man.

The policy statement of the Friends Committee calls for a fundamental breakthrough by establishing "new or reorganized United Nations commissions or agencies in specific areas with real power, acceptable control, dependable revenue and, where appropriate, effective means for peaceful enforcement." The Law of the Sea Conference will deal with three of the four major areas in which the policy statement calls for action: the seas and the seabed, environment and world resources. Hopefully the conference might influence the fourth area: arms control and disarmament.

In dealing with the seabed we base our testimony on the fifteen principles unanimously adopted in 1970 by the United Nations General Assembly in "The Declaration of Principles Governing the Seabed." The Declaration affirms that as "a common heritage of mankind," the seabed and its resources are not subject to appropriation by states or persons, but rather through international cooperation must be used to promote economic justice and must be protected from pollution. Such goals require the establishment of an international regime. Hopefully such a regime can be achieved through a Conference on the Law of the Sea scheduled to take place in 1973.

THE UNITED STATES DRAFT TREATY

As a step toward the realization of these principles, we support the basic provisions of the United States Draft Seabed Treaty, submitted to the United Nations on August 3, 1970. First, we see its proposals for an effective international regime for the oceans, as a vital step toward world order with justice. It would provide an opportunity for nations to work together to solve problems that no nation alone can solve. This experience, in turn, could be applied to the crucial task of controlling the "mad momentum" of the arms race. Might not the negotiations on the seabed be the point of breakthrough to the solution of mankind's deadliest peril, the threat of nuclear war?

EFFECTIVE STRUCTURE AND POWERS

We see in the United States Draft Seabed Treaty of August, 1970, many positive features. We like the tripartite structure of the proposed International Seabed Authority, because it would help balance the interests of different groups of nations, and be a reasonable means for attaining "just government." We approve the Tribunal with its powers to settle disputes, to impose fines and assess damages, and to withdraw licenses. We approve the way decisions are to be made by the Council: a system of concurrent majorities which would protect both the developed nations and the developing nations. We like the direct source of revenue from royalties or licenses granted.

Second, we generally approve the United States Draft Seabed Treaty proposal that much of the royalty income from the trusteeship zone and all income above operating costs from the deep sea zone should go to an international fund for assisting the developing nations, to be divided between international and regional development organizations. We hope that part of these funds could go to support national efforts for environmental protection.

PREVENTING OCEAN POLLUTION

Third, we approve the United States Draft Seabed Treaty proposal that the International Seabed Resources Authority should have real power to establish standards for preventing pollution in the international area including the trusteeship zone, and for seeing that contracting parties enforce those standards. We would hope that coastal nations would thereby be encouraged to adopt similar standards for ocean areas under their jurisdiction.

BEYOND THE PROPOSED UNITED STATES DRAFT SEABED TREATY

Fourth, while we support the United States Draft Seabed Treaty as a practical accommodation between present interests of coastal nations and the international community, we would prefer direct international jurisdiction over the entire seabed (beyond a narrow coastal zone of national jurisdiction), and we would prefer broader authority for environmental protection. Therefore, we recommend consideration in the Law of the Sea Conference of broader international pollution controls, over ocean dumping, run off from the land and air pollution. The United States Draft Treaty should be viewed as a minimum rather than a maximum negotiating position.

A GREAT OPPORTUNITY

We believe that the United Nations Resolutions relating to the seabed and the 1970 United States Draft Seabed Treaty chart a bold new course toward the achievement of peace and justice. How often does a generation have such an opportunity to create new patterns where national and world interests work together? Congress should express its determination that this great opportunity not be lost.

Mr. FRASER. This meeting of the subcommittee stands adjourned.

(Whereupon, at 4:08 p.m., the subcommittee adjourned.)

80-071—72——3

LAW OF THE SEA AND PEACEFUL USES OF THE SEABEDS

TUESDAY, APRIL 11, 1972

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FOREIGN AFFAIRS,
SUBCOMMITTEE ON INTERNATIONAL
ORGANIZATIONS AND MOVEMENTS,
Washington, D.C.

The subcommittee met at 2:10 p.m., in room 2255, Rayburn House Office Building, Hon. Donald M. Fraser (chairman of the subcommittee) presiding.

Mr. FRASER. Today the subcommittee will continue hearings on law of the seas and peaceful uses of the seabeds. Yesterday we opened this series of hearings with testimony from the executive branch. We learned a great deal about the official U.S. position concerning the planned 1973 law of the seas conference and heard a report on the progress to date in the meetings of the U.N. Seabeds Committee.

Today we are pleased to have as our witnesses Mr. John G. Laylin, attorney at law; Mr. Northcutt Ely, attorney at law; and Professor Gary Knight, Campanile Charities professor of marine resources law, Louisiana State University Law Center, Baton Rouge, La. Mr. Laylin and Mr. Ely have broad experience in international law and are recognized as experts on law of the seas and the seabeds question in the United Nations. Although they are appearing today as individuals not representing any organization or interest group, we hope to draw upon Mr. Laylin's expertise on exploitation of minerals in the seabeds and Mr. Ely's special competence concerning petroleum questions.

We will hold our questions until after all three witnesses have made their statements so that we may then address our questions to them as a panel.

Mr. Laylin, will you begin, please.

STATEMENT OF JOHN G. LAYLIN, ATTORNEY AT LAW, WASHINGTON, D.C.

Mr. LAYLIN. With your permission I will read my statement because I want to be careful not to overstate or understate.

Mr. FRASER. Fine.

Mr. LAYLIN. My name is John G. Laylin. I am a member of the Bars of the District of Columbia and New York State and of committees on the law of the sea and deep seabed of the following associations: American Bar Association, American Society of International Law, Inter-American Bar Association, and International Law Association.

I have attended as an observer a number of the meetings of the United Nations Seabed Committee. The issues under discussion are many and are complex. There are competing interest groups within the United States as well as within the United Nations.

By the way, at a meeting of the International Law Association at the Hague 2 years ago so many people wanted to speak that we were all limited to 5 minutes. Mr. Ely and I were limited each to 5, John Stevenson was limited to 5, Mr. Olmstead was limited to 5. Then the Russian wanted to speak and he asked for 20 minutes and they said, no, everybody is limited to 5 minutes, and he was quite annoyed because he said the Americans had 20 minutes. I spoke to him and I said to him later, "Didn't you see how we canceled each other out?"

I am full of admiration for the high-minded and patient performance of the American representatives to the committee. They have listened faithfully to the representations made by the different domestic groups and by the diverse foreign groups and are conscientiously seeking accommodations that are truly in the best interests of mankind.

The law firm to which I belong, Covington & Burling, advises clients that have long mined copper on land and which are now interested in recovering from the deep seabed nodules containing manganese, copper, nickel, and cobalt. I shall confine my statement to the issues affecting the recovery of minerals from the seabed beyond the area of coastal state jurisdiction and speak from the viewpoint of the hard mineral industry. I have no special qualifications to address myself to the other issues which complicate the work of our representatives.

The United States is an importer of all four of these metals. Our economy and our defense posture require a reliable source of supplies from abroad. The recent expropriations of American-controlled copper mines in Africa and South America make it imperative that we promote orderly development of the mineral resources of the deep seabed.

The countries that have taken over privately owned mining concessions are giving every evidence of a determination to obstruct such development. They are joined by certain petroleum exporting countries which appear also to want to limit competition with their products.

The discussions in the United Nations Seabed Committee and in the General Assembly confirm that many states that export minerals want to prevent, or at least curtail, recovery by anybody of the resources of the deep seabed. To achieve their goal, they seek to delay agreement as long as possible. This they do by prolonging discussions, engaging in procedural wrangles and demanding an international authority, controlled by the same majority that now runs the General Assembly, that would have the exclusive right to engage in recovering the resources of the deep seabed. Even were the natural resources importing countries willing to agree to this—and there are many that are not, including the United States, France, the United Kingdom, and the U.S.S.R.—the result would be no production. The regime would not be workable.

If there is not to be an agreement, then what?

The countries that want no competition from the strategic products of the seabed answer that the principles of international law hereto-

fore recognized have been modified by recent votes in the General Assembly to prohibit exercise of the freedom of any state to recover from the deep seabed the mineral resources found beyond the area of coastal state jurisdiction.

The right to recover resources from the sea beyond the area of coastal state jurisdiction has been universally recognized. The Honorable Philip C. Jessup, until recently a member of the World Court, testifying on November 8, 1971, before the Special Master appointed by the U.S. Supreme Court in United States v. Maine, quoted with approval from the statement of the Rapporteur of the 1950 International Law Association's Committee on Rights to the Sea-Bed and its Subsoil:

> * * * no-one in practice is prepared to assert that the mineral or other resources to be obtained from the sea-bed and its subsoil by such development are resources belonging to the community of nations, which no state or individual can or may appropriate. Such sea-bed and subsoil resources have always found an owner, in spite of the view of many writers that the seabed and its subsoil are "res communis."
>
> And there can be no doubt that international law has sanctioned such appropriation, even though it is in conflict with the idea of "res communis."

The debate before the adoption of the 1958 Convention on the Continental Shelf was whether the concept of res communis prevented a state from acquiring an exclusive right to mine in areas beyond its territorial sea. It was not questioned that any state and every state had the right to explore and exploit beyond the territorial sea unless and until an adjacent coastal state acquired by its activities some special right.

Then I quote from other authorities which I trust can go in the proceedings but there is no point in taking the time here although I think they fully support this point.

(The quoted material follows):

> F. V. Garcia Amador, a member of the International Law Commission when it engaged in the preparatory work for the 1958 Conventions, in his book entitled "The Exploitation and Conservation of the Resources of the Sea" (1963), stated:
>
> "The dominating principle of the regime of the territorial sea was the sovereignty of the coastal state. The dominating principle of the regime of the high seas, on the other hand, was the freedom of the seas, involving the right of all States to use and exploit its resources. This right was based on two premises. Firstly, the resources in question were regarded as *res communis* in that they were not liable to appropriation or exclusive use and exploitation by any single State." (p. 2.)

Mr. LAYLIN. The principle had been settled by the Permanent Court of International Justice in the *Lotus* case. The Court recognized that in the absence of a positive rule of prohibitive international law a state may act in the international oceans at its discreation.[1]

> [1] The S.S. Lotus, Judgment No. 9, September 7, 1927, Vol. II, World Court Reports, p. 20 (1927–32):
>
> "Far from laying down a general prohibition to the effect that States may not extend the application of their laws and the jurisdiction of their courts to persons, property and acts outside their territory, it leaves them in this respect a wide measure of discretion which is only limited in certain cases by prohibitive rules; as regards other cases, every State remains free to adopt the principles which it regards as best and most suitable.
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> * * * * * * * *
>
> "In these circumstances, all that can be required of a State is that it should not overstep the limits which international law places upon its jurisdiction; within these limits, its title to exercise jurisdiction rests in its sovereignty."

The argument now advanced by delegates of some copper and oil exporting countries assumes that the countries that voted in the General Assembly in 1969 for a moratorium on deepsea development thereby created law binding upon all countries—even those countries that abstained or voted against. Thus a proposed decision introduced during the closing hour of the March 1972 Seabed Committee hearing asserts that, by a resolution adopted by the General Assembly in December 1969, "pending the establishment of an international regime for the sea-bed area, states and persons, physical or juridical, are bound to refrain from all activities of exploitation of the resources of the area."

I was not able to be here yesterday, but I understand that John Stevenson reverted to this Kuwait resolution that was discussed in the meeting yesterday.

This was not the view held at the time the Moratorium Resolution was considered. One of its sponsors, Ambassador Amerasinghe of Ceylon, stated (presumably as a reason for adoption) that of course it was not legally binding. It is, as the Legal Adviser of the State Department noted, "recommendatory and not obligatory."

During the debate on the Moratorium Resolution, Ambassador Amerasinghe (Ceylon) commented:

> In other words, the effect, at the moment, is purely psychological. This draft resolution will have no legally binding effect whatsoever. If a moratorium is finally established the stop would have to be taken to draft a convention or an international agreement.

In other words, these countries are in number 88 that voted in favor. A lot of them voted because it didn't mean anything and then this Kuwait resolution of last Thursday refers to it as a binding engagement that we have already entered into. Our Legal Adviser, John Stevenson, who testified yesterday noted that it was only recommendatory and not obligatory.

Those who voted for it are free to follow their own recommendation, and those who did not agree with them are free not to follow it.

By the way, Brazil after voting stated its jurisdiction extended 200 miles.

Some delegates of the mineral exporting countries add the argument that with the recognition by delegates in the General Assembly that the seabed resources are a heritage of mankind, every state has renounced its right to recover its fair share until consented to in an international convention ratified by the other states. There has, of course, been no such renunciation.

There now exists a convention on the high seas, signed April 29, 1958, and now ratified by the United States and 48 other countries. Under this, each party is bound by formal agreement to refrain from subjecting any part of the high seas to its sovereignty, but each remains free to exercise the freedom of the high seas "recognized by the general principles of international law." The only limitation is that this right "shall be exercised by all states with reasonable regard to the interests of other states in their exercise of the freedom of the high seas."

The representatives to the United Nations of the United States and of other nations have again recognized that no state should claim soveignty over the floor of the sea beyond the recognized limits of coastal state jurisdiction; they have recognized that the benefits should be shared fairly; but no representative has agreed and no U.S. repre-

sentative has had the authority to agree that these resources should be taken off the market for any purpose, much less for the special benefit of a few favored nations—to wit, the states that have more mineral resources than they themselves put to use.

By the way, this very subcommittee has made it clear that it does not intend to be bound by any of our delegates to the United Nations, they are bound only by a treaty that is ratified by the United States with the advice and consent of the Senate.

The tactics of delay and insistence upon the unacceptable will continue so long as it is believed that this will forestall development of the mineral resources of the seabed. A seabed convention can be agreed to and will, I believe, be agreed upon once the mineral importing nations make it clear that they are not going to be deprived of their right to recover their fair share of the mineral resources of the deep seabed. Should the United States renounce its right and the right of its nationals to proceed now to develop the known potential of the seabed, should it fail to implement proposals to proceed now before the Congress, there will in every probability be no acceptable seabed convention.

A little bit like our discussions in GATT with the French where we maintained that these border taxes were a violation of the GATT convention and they would talk with us and they would talk with us and they would talk with us but the talks didn't get anywhere until we imposed that 10-percent surcharge and then the talks began to get somewhere. It is my position that the same thing is going to happen in the seabed. As long as they think we are going to have our hands tied they are going to go on delaying and delaying and complicate the thing and make demands, but once they see that the United States and Japan and West Germany and England and the Russians who are now preparing themselves to do this are not going to let our hands be tied they will get down to business. Now, we are in favor of a convention just as much as anybody is, and we think the way to do it is not to have our hands tied and let them talk us to death.

If there is no convention and no legislation for orderly development, the oceans will become, as the President concluded in his memorable statement of May 23, 1970, "an arena of unrestrained exploitation and conflicting jurisdictional claims." He called for negotiations of a treaty to govern exploitation beyond a depth of 200 meters. He recognized that "the negotiation of such a complex treaty may take some time." That was the understatement of the year. He added, "I do not, however, believe it either necessary or desirable to try to halt exploration and exploitation of the seabeds beyond a depth of 200 meters during the negotiating process."

The President then called "on other nations to join the United States in an interim policy" to assure orderly development of the resources of the deep seabed pending agreement on the proposed treaty.

The time has come for the United States to complete and put into effect the interim policy called for by the President. If it does and makes clear it does not propose to be held down like Gulliver by a web of sophistry, the voice of our delegation in the second committee will be heeded and progress toward an acceptable convention will at last begin.

Thank you, Mr. Chairman.

(The attachment to the written statement follows:)

COMMITTEE ON THE PEACEFUL USES OF THE SEA-BED AND THE OCEAN FLOOR BEYOND THE LIMITS OF NATIONAL JURISDICTION

DRAFT DECISION, KUWAIT

Recalling General Assembly Resolution 2574(D) XXIV which declares that pending the establishment of an international regime for the sea-bed area states and persons, physical or juridical, are bound to refrain from all activities of exploitation of the resources of the area;

Bearing in mind the provisions of the Declaration of Principles contained in General Assembly Resolution 2749 XXV which declares that the area shall not be subject to appropriation by any means by States or persons, natural or juridical, and that no State shall claim or exercise sovereignty or sovereign rights over any part thereof; and that no State or person shall claim, exercise or acquire rights with respect to the area of its resources incompatible with the international regime to be established and the principles of the Declaration;

Gravely concerned over the evidence adduced before Sub-Committee 1 which revealed that a number of nations, organizations and consortia were already engaged in operational activities in the area;

Having noted the assurances that some of these companies or consortia were engaged in experiments and were not acting as a commercial enterprise;

Recognizing that scientific research and experimental activities in the area are necessary for the development of technology and the promotion of the exploration of the area and its resources;

Decides in conformity with the provisions of the two aforecited resolutions to call upon all States engaged in activities in the sea-bed area to cease and desist from all commercial activities therein and to refrain from engaging directly or through their nationals in any operations aimed at the commercial exploitation of the area before the establishment of the regime.

Also decides that all arrangements made or to be made for the commercial exploitation of the resources of the area prior to the establishment of the regime shall have no legal validity and shall not form the legal basis for any claims with respect to any part of the area or its resources.

Mr. FRASER. Thank you very much, Mr. Laylin. That is a very helpful statement.

Our next witness is Mr. Ely.

STATEMENT OF NORTHCUTT ELY, ATTORNEY AT LAW, WASHINGTON, D.C.

Mr. ELY. Thank you, Mr. Chairman.

With your permission I would suggest that this statement be printed in full in the record.

Mr. FRASER. Without objection, the statement will be inserted in the record at this point.

(The written statement follows:)

STATEMENT OF NORTHCUTT ELY, COUNSELLOR AT LAW, WASHINGTON, D.C.

I am honored by the Committee's invitation to testify. The assigned subject is the Nation's seabed policy in relation to our petroleum supplies. In accepting the invitation, I made it plain, and must reiterate, that I do not appear here representing anyone. The views that I shall state are my own, those of a concerned citizen.

I am concerned because of the grim picture presented by our country's energy gap. This is the imminent discrepancy between demand, that is, the quantities of fuels required to sustain an acceptable standard of living and desirable levels of employment, and supply, the quantities of fuels available from secure sources at costs acceptable to the Nation's economy. The Secretary of the Interior has well said that, to the extent that energy is unavailable, the work which it would otherwise have done must be foregone. This concern is sharpened by a growing

conviction that the Nation's policy with respect to seabed minerals has been on a wrong course, which, if persisted in, will substantially weaken the energy resource potential of the United States.

I.

This administration's seabed policy, as formulated in the draft treaty which it tabled as a working paper in the U.N. Seabed Committee, relates to three geographical areas: the continental margin of the United States, the continental margins adjacent to other coastal States, and the abyssal ocean floor. As my subject today relates particularly to petroleum, it is identified primarily with the continental margins, and the extent of the jurisdiction that the coastal States now have, or ought to have, in these areas. We are to discuss the limits of national seabed jurisdiction on the continental margins, and the possible interaction of international interests in these areas.

The problems of limits of national seabed jurisdiction were identified admirably in a statement by Professor R. R. Baxter, Counselor on International Law to the U.S. State Department, in a statement on January 20, 1972. He said:

> ". . . States are likely to find themselves negotiating on the basis of their own answers to a rather specific set of questions. For example, on the complex problems of limits, a State will find it necessary to answer the following questions:
>
> "1. What specific rights does it need and want off its own coast? In other words, what authority should be conferred on coastal States generally?
>
> "2. What right does it want regarding similar areas off the coasts of one or more other States? Put in somewhat different terms, what authority should be denied to coastal States generally or be made subject to specific conditions and requirements?
>
> "3. What rights does it wish to confer on international or regional organizations and to derive as a member of such organizations? What will be the authority of international or regional organizations to regulate, review, or coordinate the exercise of authority by coastal States, flag States, and other States?
>
> "4. To what extent may the rights regarded as needful by a State be shared with other States or organizations, so that jurisdiction may be exercised not exclusively but concurrently?
>
> "5. What priorities does it attach to obtaining each of these rights?"

I would answer these questions as follows, as to American national interests, particularly those of the petroleum consumer:

1. *As to the American coast.*—The United States, in my opinion, now has exclusive sovereign rights to explore and exploit, and, of course, to prevent all others from exploring or exploiting, the mineral resources of the submerged portions of the continent which are prolongations of the land territory of the United States, irrespective of depth of water or distrance from shore. These righs extend to, and are limited by, the outer limit of the continental margin, including the continental shelf and slope, and that portion of the continental rise which overlies the junction of the continental land mass with the rocks of the abyssal ocean floor. These are inherent rights, attributable to the sovereignty of the United States over the adjacent land territories. The Convention on the Continental Shelf did not originate them, but it articulates them in the form of a declaration of exclusive sovereign rights out to a depth of 200 meters and beyond that limit to wherever the depth of the superjacent waters admits of exploitation. The travaux perparatoires of that Convention, as well as its legislative history in the U.S. Senate, make it clear that the so-called exploitability criterion was added on the demand of the 20 American States to assure their continued exclusive seabed jurisdiction over the whole continental terrace, shelf and slope, down to the greatest depths. I shall not take the time to argue these legal points now, but will annex a discussion of them to my testimony as an appendix. The rights that the United States "needs and wants" off its own coasts are those which it now has, as I have described them, and nothing less. The energy gap which confronts this country, our dependence on our offshore petroleum in even partially closing that gap, and the danger inherent in dependence on unreliable foreign sources of oil, make this the only answer which is compatible with national security and the health of the national economy. I remarked earlier that energy denied us means work and revenue foregone. It also means a deepening of the balance of payments deficit

to pay for imported oil. As I point out later, we face an energy gap which may force the importation of as much as 57 percent of our petroleum supply by 1985 and the outlay of $25 billion annually to pay for it. There is thus only one answer to Professor Baxter's first question.

2. *Professor Baxter's second question is, what rights does this coastal State want regarding similar areas off the coasts of other States?*—We must and should recognize the same rights in others that we assert for ourselves. It is far better, for the American consumer, that the terms on which American industry explores and develops the resources of a foreign continental margin be stated in the varied terms of the laws of a large number of coastal States competing with one another for the investor's capital, than that all continental margins be controlled by a single governmental monopoly, that is by a single international agency which is created by treaty, and is dominated by the objective of extracting from the consumer all that the traffic will bear, in the form of costs added as taxes, royalties, production sharing, and direct freeride participation in profits but not risks. All of these ideas have been well articulated in the United Nations debates under the general heading of "resource management." As to Professor Baxter's alternate phrasing, "what authority should be denied to coastal States generally or be made subject to specific conditions and requirements," the answer is that coastal States cannot be compelled to renounce the exclusive rights that the International Court of Justice has declared them to possess, but, as a matter of enlightened self-interest, coastal States ought to be willing to agree on standards to prevent pollution, to respect competing uses of the environment, and, hopefully, on norms of fair play which assure security of tenure to the investor, and, hopefully again, to agree on the principle of compulsory settlement of disputes with foreign investors, and boundary disputes with one another.

3. *The third question asked is what rights does it (the United States in our case) wish to confer on international or regional organizations, and to derive therefrom?*—What authority shall such organizations have to regulate review, or coordinate the exercise of authority by coastal States, flag States, and other States? Speaking now of the continental margins, in my opinion the only functions that an international organization ought to have are those involving establishment and enforcement of agreed standards relating to pollution abatement, protection of the environment, respect for competing uses of the sea, and the formulation of regulations (for voluntary adoption), designed to prevent waste. Quite another organization ought to have functions relating to obligatory settlement of disputes: The International Court of Justice with respect to boundary disputes between States, the World Bank's arbitration mechanisms for the settlement of disputes between a State and nationals of another State. Perhaps still another organization ought to receive and disburse whatever amounts the coastal States can be induced to pay out of their petroleum revenues into international funds for the assistance of less developed countries.

4. *The fourth question posed is: To what extent may the rights regarded as needful by a State be shared with other States or organizations, so that jurisdiction may be exercised not exclusively but concurrently?*—My answer is that the United States should continue to exercise all of its present powers over its continental margin exclusively, and not concurrently with any international organization whatever. It is not necessary, indeed it would be suicidal, to reounce these sovereign powers to some international agency, as was once proposed, and to receive back delegated powers, limited to those enunciated in a treaty. Everything is wrong with that premise, starting with the dichotomy between the interests of the American consumer in obtaining an abundant supply of petroleum at reasonable cost, free of every restraint of trade, and the opposing interests of an international organization charged with the task of getting out of the consumer all that the traffic will bear, under the euphemism of "resource management." Disputes over the meaning of a document are absolutely certain when the same words are agreed to by negotiators representing interests in violent collision, and such disputes, under the same proposal, would be determined by a special tribunal dominated by interests opposed to those of the United States. All acceptable limitations on American authority over the American continental margin, including, if we wish, a dedication of money to assist the less developed countries, can be accomplished in the form of voluntarily incurred servitudes on the American title, not by renunication of that title and the acceptance back of a contractual right of occupancy of what once was our own.

5. *The fifth question asked is: What priorities does it (the United States) attach to obtaining each of these rights?* Safeguarding (not "obtaining") rights

now existing in the American continental margin should be by all odds the most important objective of American seabed mineral policy.

I invite your attention in more detail to the American energy crisis that overhangs the American economy.

II

The sombre petroleum supply and demand equation can be stated in a few words. The Secretary of the Interior's published estimate [1] is that even if population increases only 15 percent by 1985, demands for energy in all forms will double by that date. By year 2000, population will have added only another 15 percent to the 1970 figure, but the demand for energy will be three times that of 1970.[2] Even the most optimistic forecasts of the contribution from nuclear energy and coal put the major burden on oil and gas, a combined percentage of about 76 percent in 1970, 65 percent in 1985, 61 percent in 2000.[3] Only coal is in abundant supply, but its conversion into gas and liquid substitutes for petroleum pose huge technical, and environmental problems. The domestic reserves of higher grade uranium will fall short by a third or more of meeting the cumulative demand for nuclear energy to the year 2000, unless the breeder reactor is perfected,[4] as we must believe that it will. Nevertheless, the environmental problems posed by nuclear power plants are enormous, and nuclear power cannot be substituted for fuels required by automobiles and tractors.

There is no foreseeable likelihood that onshore domestic production of oil and gas can meet the projected demand for these fuels. It is not doing so now, and the equation is sure to worsen. As to gas, the ratio of known reserves to annual production had fallen to 14/1 at the end of 1970.[5] If reserves continue to be discovered and developed at only present rates for the next eight years, then by 1980 less than two-thirds of the demand for gas can be met by domestic supplies.[6] There is difference of opinion as to the extent to which the discovery rate can be turned upward again, and by what incentives. Some experts believe that there is enough domestic undiscovered gas to last out the present century (this is not very long), but they add that 40 percent of this is offshore.

As to petroleum, the Secretary's report says: [7]

"Within the probable range of future U.S. oil requirements, one conclusion seems obvious. Without a major positive change in our domestic oil finding and producing efforts, the United States will become increasingly dependent on other nental Shelf, in its report of December 21, 1970, came to the correct conclusions, tar sands could contribute to our domestic self-sufficiency, but before these sources can begin to make significant contributions we may become dependent on foreign sources for as much as half of our oil supplies. This estimate of dependence assumes that we will be able to maintain our oil production near its present level. Some industry analysts have questioned our ability to sustain these rates. The less optimistic anticipate a decline of some 30 percent in production from 1970 to 1985.

"An estimated 2.8 trillion barrels of crude oil and more than 200 billion barrels of natural gas liquids occurred originally in place in the earth within the United States and its offshore areas. About half of these resources are offshore, and of this portion, about half are in water depths greater than 200 meters. However, only 171 billion barrels of crude offshore and 246 billion onshore are estimated to be recoverable under current technological and economic conditions—once they have been found. . . . Proved reserves of crude oil and natural gas liquids, both on and offshore, amount to 39 billion and 7.7 billion barrels, respectively. Included are 9.6 billion barrels of crude oil reserves on Alaska's North Slope which will not be available until adequate transportation facilities are developed. Reserves in the Lower 48 States continued their decline of recent years. About 4 billion barrels of petroleum liquids were produced in the United States last year. The ratio of reserves to production in the Lower 48 States has fallen to about 8.8 for crude oil."

The rate of discovery is declining. The Secretary says: [8]

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[1] United States Energy: A summary review, U.S. Department of the Interior, January 1972.
[2] *Id.*, p. 17.
[3] *Id.*, p. 20, table 2.
[4] *Id.*, p. 26.
[5] *Id.*, p. 36.
[6] *Id.*, p. 36.
[7] *Id.*, p. 45.
[8] *Id.*, p. 49.

". . . Only some 30 wildcat wells were needed to find a significant field in the late 1940's; the number of wells required had nearly doubled by 1960, and this trend has not been reversed. The importance of finding large fields becomes apparent when it is noted that last year 63 percent of U. S. production was from only 264 giant fields. There are over 35,000 oil fields in the United States. These same giant fields hold 21.7 billion barrels of proved reserves, about 70 percent of the Nation's total exclusive of the Alaskan North Slope."

There are major technical and environmental difficulties in the way of providing substitutes for petroleum from oil shale, tar sands, and the liquefaction of coal, and for natural gas from gasification of coal. It is clear that for the foreseeable future the energy gap must be petroleum imports, on an increasing scale incompatible with the national security.

The National Petroleum Council, at the Secretary's request, is at work on a report on the United States Energy Outlook. The Council's Interim Report (November 1971), covering the period to 1985, came to the conclusion that whereas in 1970 domestic sources of energy supplied nearly 88 percent of U.S. consumption, by 1985 this percentage would decrease to about 70 percent, and we would be dependent on foreign sources for nearly 30 percent of our energy, unless drastic and probably costly steps are undertaken to expand domestic production. More disturbing, unless there is a dramatic increase in the rate of domestic petroleum discoveries or development of substitutes, it is estimated that our dependence on foreign oil will increase from 22 percent in 1970 to nearly 57 percent in 1985, and our dependence on foreign gas will increase from a little over 4 percent to more than 28 percent.

There are grave national dangers in any such dependence on foreign oil and gas. There have been at least a dozen major restrictions on foreign oil supplies in the last decade or so. Examples are Mossadegh's seizure of foreign properties in Iran, which shut off that source for three years; the closure of the Suez Canal; the war in Nigeria; nationalization in Algeria; the blowing up of the Trans-Arabian pipeline; collapse of Indonesian production during the Sukarno regime; the Libyan Government's curtailment of production, and so on. And paralleling the threats to the quantity are the continuing upward pressures on cost of foreign oil to western consumers. The Organization of Petroleum Exporting Countries (OPEC) now embraces countries which hold two-thirds of the world's proven reserves and supply 85 percent of the crude oil consumed in Western Europe and Japan. It is an organization dedicated to obtaining for its members the highest possible income from oil production. Its successes to date need no elaboration.

Until this year, 1972, the United States, despite the fact that its proven reserves (39 billion barrels) were less than 7 percent of the world's total (575 billion), had one short-range trump card: We had a shut-in potential, that is, a potential rate of production in excess of current daily production rates, which could be called upon for emergencies, as it was during the critical closure of the Suez Canal. American consumers have not been at the complete mercy of foreign governments. Today, that excess potential has all but disappeared. Substantially all American fields are producing at or near their maximum efficient rates of production.

It is consequently impossible to exaggerate the importance of the untapped petroleum reserves of the American continental margin to our national economy and our national defense.

Note again the Interior Department's estimate, previously quoted, that about half of the crude oil and natural gas liquids that occurred originally in place within the United States and its offshore areas was located offshore, and, of this offshore portion, about half is in water depths greater than 200 meters. Applying these ratios to the Secretary's estimate of the recoverable offshore resource, 171 billion barrels, it would follow that the stake of the American people in the petroleum resources of the continental margin seaward of the 200 meter depth line is about 85 billion barrels of probable recoverable reserves. This is over twice the total quantity of the presently proven reserves, onshore and offshore, 39 billion barrels.

There has been considerable discussion in the United Nations of a 200-mile zone, as a limit on coastal State's resource jurisdiction. The U.S.G.S. estimates that the petroleum resources of the American continental margin seaward of this 200-mile line exceed 40 billion barrels.[9] This is about equal to the total of all presently proven American reserves, onshore and offshore,

[9] Memorandum, Nov. 5, 1971, Assistant Chief Geologist for Marine Geology to the Staff Assistant for the Undersecretary.

The National Petroleum Council has estimated[10] that:

"Within less than five years, technology will allow drilling and exploitation in water depths up to 1,500 feet (457 meters). Within ten years technical capability to drill and produce in water depths of 4,000–6,000 feet (1,219–1,829 meters) will probably be attained."

III

In the light of these facts, the Senate's Special Committee on Outer Continental Shelf, in its report of December 21, 1970, came to the correct conclusion, in my opinion, about American seabed policy. It said: Pp. 29, 30:

"Whatever renunciation might be intended to be made through the adoption of a future seabed treaty, no renunciation should be permitted to be made which in any way encroaches upon the heart of our sovereign rights under the 1958 Geneva Convention. We construe the heart of our sovereign rights under the 1958 Geneva Convention[11] to consist of the following:

"(1) The exclusive owership of the mineral estate and sedentary species of the entire continental margin;

"(2) The exclusive right to control access for exploration and exploitation of the entire continental margin; and

"(3) The exclusive jurisdiction to fully regulate and control the exploration and exploitation of the natural resources of the entire continental margin.

"Regarding the proposal suggesting renunciation of the heart of our sovereign rights, we have three objections:

"(1) The offer to renounce our sovereign rights beyond the 200-meter isobath could cast a cloud on our present title to the resources of our continental margin;

"(2) The renunciation of our sovereign rights to the resources of our continental margin beyond the 200-meter isobath in no way guarantees the **willingness of the international community to redelegate functionally to us the same rights we would renounce, and**

"(3) Our sovereign rights to explore and exploit our continental margin, although reaffirmed by the 1958 Geneva Shelf Convention, are nevertheless inherent rights which have vested by virtue of the natural extension beneath the sea of our sovereign land territory. Our sovereign rights to the resources of this area are not dependent upon the acquiescence and approval of the international community. To renounce these inherent rights and to ask that they be returned in part to us merely requests the international community to give us that which, ipso facto and ab initio, is rightfully ours to begin with."

I subscribe to these conclusions.

CONCLUSION

To sum up, I would make four points:

1. With respect to the American continental margin, we should stand on our rights under the Continental Shelf Convention, reassert the policy of the Truman Proclamation, and assert that the exclusive jurisdiction of the United States under the Convention and under customary law extends to, and is limited by the extent of, the submerged continental land mass which constitutes a prolongation of the territories of the United States.

2. President Nixon's five commendable principles of seabed policy—the collection of substantial mineral royalties to be used for international community purposes and the establishment of general rules to prevent unreasonable interference with other uses of the ocean, to protect the ocean from pollution, to assure the integrity of investments and compulsory settlement of disputes, can

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[10] Petroleum Resources Under the Ocean Floor: Report of the National Petroleum Council to the Secretary of the Interior, March 1969, p. 8.

[11] [Committee's note] "Article IV, Section 3, Clause 2 of the United States Constitution delegates to the Congress the power to dispose of all property of the United States. All rights specified in the 1953 Outer Continental Shelf Lands Act, and in the 1958 Geneva Convention on the Continental Shelf are the property of the United States. The designation of those rights constituting the heart of our sovereign rights is in no way intended to be an exhaustive description of all of the property rights possessed by the people of the United States in our continental margin. As we interpret Article IV, Section 3, Clause 2 of the United States Constitution, renunciation of any of the rights referred to in any of the aforementioned laws would require an Act of Congress."

all be stated in a concise protocol to the existing Convention on the Continental Shelf, stripped of rhetoric about "renunciation" and "trusteeship." As to what constitutes "substantial mineral royalties," I would say that 10 percent of the United States governmental revenues from areas seaward of the 12-mile zone would be generous. Congress, in my opinion, should not approve a donation, as proposed, of one-half to two-thirds of the federal revenues from the American continental margin seaward of the 200-meter line for disposition by an international legislature.

3. The proposal of a uniform deep-water offshore law to be enacted by all the coastal nations of the world has apparently been wisely dropped. We cannot very well propose offshore laws to other nations that Congress would never substitute for the Outer Continental Shelf Lands Act. Beyond this, however, we should oppose, not propose, the creation of a world-wide offshore O.P.E.C., as that proposal would have brought about. An equal folly is to encourage the coastal nations to increase their exactions from American industry. The American draft treaty would do this by taking coastal States' offshore revenues to the extent of 50 percent to 66⅔ percent, for the benefit of the international community, thus forcing those States to collect two or three dollars from industry, and ultimately the consumer, in order to keep one dollar for themselves.

4. With respect to the abyssal ocean floor, seaward of the continental margin, the American petroleum consumers' interests are not so imminently affected. Hard minerals will probably be harvested from the abyssal ocean floor before oil wells are drilled there. But, in my view, the concept of vesting sovereign powers in a new supergovernment, with power to grant or refuse licenses to use the deep seabed, on its own terms, is dangerous and should be reconsidered. It is a reversal of the principle of the freedom of the seas. Instead, as the committees of the International Law Association's American Branch and the American Bar Association have proposed, the nations could simply agree, perhaps in reciprocal legislation, or perhaps a protocol to the Convention on the High Seas, on norms of good conduct in deep sea mineral operations, registration of mining claims of stated size, and payment of agreed percentages of governmental revenues from deep sea operations into the World Bank, for assistance to the developing countries. Beyond this, the proposed international machinery, incredibly complex, is a floating Chinese pagoda.

Proponents of this treaty would create the illusion that their only opponents are in the mineral industries, and that these industries are thick-headed in failing to see the advantages that the American draft treaty would bring them. The test however, is not what is good for oil companies or mining companies, but what is good for the American people. The treaty fails that test. It is opposed, as it ought to be, by spokesmen for the consumer and the taxpayer in the United States Congress, and elsewhere.

I think President Truman was right when he proclaimed:

"Having concern for the urgency of conserving and prudently utilizing its natural resources, the Government of the United States regards the natural resources of the subsoil and sea bed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control."

That concern does not stop at the 200-meter line. It encompasses the entire American continental margin, for this is rightfully the common heritage of the American people. The urgency that President Truman identified 27 years ago is greater today than it was then, and it is increasing daily as our petroleum reserves steadily diminish.

Mr. ELY. I will shorten my comments somewhat.

Mr. Chairman, I am honored by your invitation to testify. When I was invited I made it clear that I appear in an individual capacity and not representing anyone. I am a concerned citizen. I am concerned because of the grim picture presented by our country's energy gap. This gap is the imminent discrepancy between demand—that is, the quantities of fuels required to sustain an acceptable standard of living—and desirable levels of employment and supply, the quantities of fuels available from secured sources at costs which are acceptable to the Nation's economy.

The Secretary of the Interior has well said that to the extent that energy is unavailable the work that it otherwise would have done must be foregone. This concern is sharpened by a growing conviction that the Nation's policy with respect to seabed minerals has been on the wrong course which if persisted in will substantially weaken the energy resource potential of the United States.

The Administartion's seabed policy, as formulated in the draft treaty which was tabled as a working paper at the U.N. Seabed Committee, relates to three geographical areas: The continental margin of the United States, the continental margins adjacent to other coastal States, and the abyssal ocean floor. As my subject today relates particularly to petroleum, it is identified primarily with the continental margins, and the extent of the jurisdiction that the coastal States now have, or ought to have, in these areas. We are to discuss the limtis of national seabed jurisdiction on the continental margins, and the possible interaction of international interests in these areas.

The problems of limits of national seabed jurisdiction were identified admirably in a statement by Professor R. R. Baxter, Counselor on International Law to the U.S. State Department, in a statement on January 20, 1972. In my prepared statement I quote his five questions and I take up a discussion of them.

The first of them which he relates is this: What specific rights does it—the coastal State—need and want off its own coast? In other words, what authority should be conferred on coastal States generally?

My answer to this, as to the American coast, is that the United States, in my opinion, now has exclusive sovereign rights to explore and exploit, and, of course, to prevent all others from exploring or exploiting the mineral resources of the submerged portions of the continent which are prolongations of the land territory of the United States, irrespective of depth of water or distance from shore. These rights extend to, and are limited by, the outer limit of the continental margins, including the Continental Shelf and slope, and that portion of the continental rise which overlies the junction of the continental land mass with the rocks of the abyssal ocean floor.

These are inherent rights, attributable to the sovereignty of the United States over the adjacent land territories. The Convention on the Continental Shelf did not originate them, but it articulates them in the form of a declaration of exclusive sovereign rights out to a depth of 200 meters and beyond that limit to wherever the depth of the superjacent waters admits of exploitation. The travaux perparatoires of that convention, as well as its legislative history in the U.S. Senate, make it clear that the so-called exploitability criterion was added on the demand of the 20 American States to assure their continued exclusive seabed jurisdiction over the whole continental terrace, shelf, and slope, down to the greatest depths. I shall not take the time to argue these legal points now but will annex a discussion of them to my testimony as an appendix.

The rights that the United States needs and wants off its own coasts are those which it now has, as I have described them, and nothing less. The energy gap which confronts this country, our dependence on our offshore petroleum in even partially closing that gap, and the danger inherent in dependence on unreliable foreign sources of oil

make this the only answer which is compatible with national security and the health of the national economy. I remarked earlier that energy denied us means work and revenue foregone. It also means a deepening of the balance-of-payments deficit to pay for imported oil. We face an energy gap which may force the importation of as much as 57 percent of our petroleum supply by 1985 and the outlay of $25 billion annually to pay for it. There is thus only one answer to Professor Baxter's first question in my opinion.

Professor Baxter's second question is, what rights does this coastal state want regarding similar areas off the coasts of other states? To this my answer is that we must and should recognize the same rights in others that we assert for ourselves. Indeed, it is far better for the American consumer that the terms on which American industry explores and develops the resources of a foreign continental margin be stated in the varied terms of the laws of a large number of coastal states competing with one another for the investor's capital than that all continental margins be controlled by a single governmental monopoly; that is, by a single international agency which is created by treaty and is dominated by the objective of extracting from the consumer all that the traffic will bear in the form of costs added as taxes, royalties, production sharing, and direct free-ride participation in profits but not risks. All of these ideas have been well articulated in the United Nations debates under the general heading of "resource management."

As to Professor Baxter's alternate phrasing: "What authority should be denied to coastal states generally or be made subject to specific conditions and requirements," the answer is that coastal states cannot be compelled to renounce the exclusive rights that the International Court of Justice has declared them to possess but, as a matter of enlightened self-interest, coastal states ought to be willing to agree on standards to prevent pollution, to respect competing uses of the environment and, hopefully, on norms of fair play which assure security of tenure to the investor and, hopefully again, to agree on the principle of compulsory settlement of disputes with foreign investors and boundary disputes with one another.

I may say that these are echos of President Nixon's five points that he made in his pronouncement of May 1970.

The remainder of Professor Baxter's questions to which I want to direct particular attention is the fourth one. To what extent may the rights regarded as needful by a state be shared with other states or organizations, so that jurisdiction may be exercised not exclusively but concurrently? My answer is that the United States should continue to exercise all of its present powers over its continental margin exclusively and not concurrently with any international organization whatever. It is not necessary, indeed it would be suicidal, to renounce these sovereign powers to some international agency, as was once proposed, and to receive back delegated powers limited to those enunciated in a treaty. Everything is wrong with that premise, starting with the dichotomy between the interests of the American consumer in obtaining an abundant supply of petroleum at reasonable cost, free of every restraint of trade, and the opposing interests of an international organization charged with the task of getting out of the consumer all that the traffic will bear under the euphemism of resource management.

Disputes over the meaning of a document are absolutely certain when

the same words are agreed to by negotiators representing interests in violent collision, and such disputes under the same proposal would be determined by a special tribunal dominated by interests opposed to those of the United States. In my opinion all acceptable limitations on American authority over the American continental margin, including, if we wish, a dedication of money to assist the less developed countries, can be accomplished in the form of voluntarily incurred servitudes on the American title, not by renunciation of that title and the acceptance back of a contractual right of occupancy of what once was our own.

Now may I turn to the somber petroleum supply and demand equation which can be stated in a few words. The Secretary of the Interior's published estimate is that even if population increases only 15 percent by 1985, demands for energy in all forms will double by that date. By the year 2000, population will have added only another 15 percent to the 1970 figure, but the demand for energy will be three times that of 1970. Even the most optimistic forecasts of the contribution from nuclear energy and coal put the major burden on oil and gas, a combined percentage of about 76 percent in 1970, 65 percent in 1985, 61 percent in 2000.

Only coal is in abundant supply, but its conversion into gas and liquid substitutes for petroleum pose huge technical, financial, and environmental problems. The domestic reserves of higher grade uranium will fall short by a third or more of meeting the cumulative demand for nuclear energy to the year 2000, unless the breeder reactor is perfected, as we must believe that it will. Nevertheless, the environmental problems posed by nuclear powerplants are enormous and nuclear power cannot be substituted for fuels required by automobiles and tractors.

There is no foreseeable likelihood that onshore domestic production of oil and gas can meet the projected demand for these fuels. It is not doing so now, and the equation is sure to worsen. As to gas, the ratio of known reserves to annual production had fallen to 14 to 1 at the end of 1970. If reserves continue to be discovered and developed at only present rates for the next 8 years, then by 1980 less than two-thirds of the demand for gas can be met by domestic supplies. There is difference of opinion as to the extent to which the discovery rate can be turned upward again, and by what incentives. Some experts believe that there is enough domestic undiscovered gas to last out the present century, and this is not very long, but they add that 40 percent of this is offshore.

As to petroleum, the Secretary's report says:

> Within the probable range of future U.S. oil requirements, one conclusion seems obvious. Without a major positive change in our domestic oil finding and producing efforts, the United States will become increasingly dependent on other nations for oil supplies. Ultimately, production of synthetic oil from shale, coal, or tar sands could contribute to our domestic self-sufficiency, but before these sources can begin to make significant contributions we may become dependent on foreign sources for as much as half of our oil supplies. This estimate of dependence assumes that we will be able to maintain our oil production near its present level. Some industry analysts have questioned our ability to sustain these rates. The less optimistic anticipate a decline of some 30 percent in production from 1970 to 1985.

The Secretary goes on with estimates of the crude oil remaining to be discovered offshore and in place in the earth. He states that perhaps 171 billion barrels of petroleum can be recovered from offshore and he

contrasts this with 39 billion barrels of proven reserves altogether onshore and offshore today, and he points out that elsewhere about half of this estimated 171 billion offshore barrels lie besevered of the 200 meter line.

The National Petroleum Council, at the Secretary's request, is at work on a report on the U.S. Energy Outlook. It confirms the Secretary's rather ominous indication of supply and demand. It comes to the conclusion that whereas in 1970 domestic sources of energy supplied nearly 88 percent of U.S. consumption, by 1985 this percentage would decrease to about 70 percent and we would be dependent on foreign sources for nearly 30 percent of our energy. Far more disturbing is the fact that unless the present trends are reversed the forecasts of supply and demand indicate that we will be dependent on foreign oil for 57 percent of our petroleum supply by 1985 as compared with about 22 percent now.

There are obviously grave national dangers in any such dependence on foreign oil and gas. You have only to remember Mossadegh's seizure of foreign properties in Iran that shut off that supply for 3 years, the closure of the Suez Canal, the war in Nigeria, the nationalization in Algeria, the blowing up of the trans-Arabian pipeline, the collapse of Indonesian production during the Sukarno regime, the curtailment of Libya's production, and so on. And paralleling the threats to the quantity are the continuing upward pressures on cost of foreign oil to western consumers.

The importance of our continental margin in meeting this energy gap is self-evident. There has been considerable discussion in the United Nations of a 200-mile limitation on coastal states resource jurisdiction. A USGS report has indicated that the petroleum resources of the American continental margin seaward of this 200-mile line exceed 40 billion barrels which is about equal to the total of all presently proven American reserves, onshore and offshore.

In the light of these facts I subscribe to the conclusions reached by the Senate's Special Committee on the Outer Continental Shelf in its report of December 21, 1970. It said:

> Whatever renunciation might be intended to be made through the adoption of a future seabed treaty, no renunciation should be permitted to be made which in any way encroaches upon the heart of our sovereign rights under the 1958 Geneva Convention. We construe the heart of our sovereign rights under the 1958 Geneva Convention to consist of the following:
>
> (1) The exclusive ownership of the mineral estate and sedentary species of the entire continental margin;
>
> (2) The exclusive right to control access for exploration and exploitation of the entire continental margin; and
>
> (3) The exclusive jurisdiction to fully regulate and control the exploration and exploitation of the natural resources of the entire continental margin.

In conclusion, Mr. Chairman, may I make four points.

First, with respect to the American continental margin, we should stand on our rights under the Continental Shelf Convention, reassert the policy of the Truman Proclamation, and assert that the exclusive jurisdiction of the United States under the convention and under customary law extends to, and is limited by the extent of, the submerged continental land mass which constitutes a prolongation of the territories of the United States.

Second, President Nixon's five commendable principles of seabed policy—the collection of substantial mineral royalties to be used for

international community purposes and the establishment of general rules to prevent unreasonable interference with other uses of the ocean, to protect the ocean from pollution, to assure the integrity of investments and compulsory settlement of disputes, can all be stated in a concise protocol to the existing Convention on the Continental Shelf, stripped of rhetoric about "renunciation" and "trusteeship." As to what constitutes "substantial mineral royalties," I would say that 10 percent of the U.S. governmental revenues from areas seaward of the 200-meter line would be generous. Congress, in my opinion, should not approve a donation, as proposed, of one-half to two-thirds of the Federal revenues from the American continental margin seaward of the 200-meter line for disposition by an international legislature.

Third, the proposal of a uniform deepwater offshore law to be enacted by all the coastal nations of the world has apparently been wisely dropped. We cannot very well propose offshore laws to other nations that Congress would never substitute for the Outer Continental Shelf Lands Act. Beyond this, however, we should oppose, not propose, the creation of a worldwide offshore OPEC, as that proposal would have brought about. An equal folly is to encourage the coastal nations to increase their exactions from American industry. The American draft treaty would do this by taking coastal states' offshore revenues to the extent of 50 to 66⅔ percent, for the benefit of the international community, thus forcing those states to collect $2 or $3 from industry, and ultimately the consumer, in order to keep $1 for themselves.

Fourth, with respect to the abyssal ocean floor, seaward of the continental margin, the American petroleum consumers' interests are not so imminently affected. Hard minerals will probably be harvested from the abyssal ocean floor before oil wells are drilled there. But, in my view, the concept of vesting sovereign powers in a new supergovernment, with power to grant or refuse licenses to use the deep seabed, on its own terms, is dangerous and should be reconsidered. It is a reversal of the principle of the freedom of the seas. Instead, as the committees of the International Law Association's American branch and the American Bar Association have proposed, the nations could simply agree, perhaps in reciprocal legislation, or perhaps a protocol to the Convention on the High Seas, on norms of good conduct in deep sea mineral operations, registration of mining claims of stated size, and payment of agreed percentages of governmental revenues from deep sea operations into the World Bank, for assistance to the developing countries. The proposed international machinery, incredibly complex, is a floating Chinese pagoda.

Proponents of this treaty would create the illusion that their only opponents are in the mineral industries, and that these industries are thickheaded in failing to see the advantages that the American draft treaty would bring them. The test, however, is not what is good for oil companies or mining companies, but what is good for the American people. The treaty fails that test. It is opposed, as it ought to be, by spokesmen for the consumer and the taxpayer in the U.S. Congress, and elsewhere.

I think President Truman was right when he proclaimed:

> Having concern for the urgency of conserving and prudently utilizing its natural resources, the Government of the United States regards the natural resources of the subsoil and seabed of the Continental Shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control.

That concern does not stop at the 200-meter line, it encompasses the entire American continental margin for this is rightfully the common heritage of the American people. The urgency that President Truman identified 27 years ago is greater today than it was then, and it is increasing daily as our petroleum reserves steadily diminish.

Thank you, Mr. Chairman.

I have a number of appendices to my statement which, if the committee permits, I would like to have included in the record.

Mr. FRASER. Yes, we will include those as part of the record.

(The appendices follow:)

APPENDIX A TO STATEMENT OF NORTHCUTT ELY

TEXT OF THE CONVENTION ON THE CONTINENTAL SHELF[1]

The States Parties to this Convention have agreed as follows:

Article 1: For the purpose of these articles, the term "continental shelf" is used as referring (*a*) to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (*b*) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.

Article 2: 1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 of this article are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal State.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.

4. The natural resources referred to in these articles consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil.

Article 3: The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the airspace above those waters.

Article 4: Subject to its right to take reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources, the coastal State may not impede the laying or maintenance of submarine cables or pipe lines on the continental shelf.

Article 5: 1. The exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.

2. Subject to the provisions of paragraphs 1 and 6 of this article, the coastal State is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and the exploitation of its natural resources, and to establish safety zones around such installations and devices and to take in those zones measures necessary for their protection.

3. The safety zones referred to in paragraph 2 of this article may extend to a distance of 500 metres around the installations and other devices which have been erected, measured from each point of their outer edge. Ships of all nationalities must respect these safety zones.

4. Such installations and devices, though under the jurisdiction of the coastal State, do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea of the coastal State.

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[1] The text of the convention printed herein constituted Annex IV to the Final Act of the United Nations Conference on the Law of the Sea, which was certified by the Legal Counsel, for the Secretary-General of the United Nations. [Footnote added by the Department of State.]

5. Due notice must be given of the construction of any such installations, and permanent means for giving warning of their presence must be maintained. Any installations which are abandoned or disused must be entirely removed.

6. Neither the installations or devices, nor the safety zones around them, may be established where interference may be caused to the use of recognized sea lanes essential to international navigation.

7. The coastal State is obliged to undertake, in the safety zones, all appropriate measures for the protection of the living resources of the sea from harmful agents.

8. The consent of the coastal State shall be obtained in respect of any research concerning the continental shelf and undertaken there. Nevertheless the coastal State shall not normally withhold its consent if the request is submitted by a qualified institution with a view to purely scientific research into the physical or biological characteristics of the continental shelf, subject to the proviso that the coastal State shall have the right, if it so desires, to participate or to be represented in the research, and that in any event the results shall be published.

Article 6: 1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite each other, the boundary of the continental shelf appertaining to such States shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary is the median line, every point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

2. Where the same continental shelf is adjacent to the territories of two adjacent States, the boundary of the continental shelf shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary shall be determined by application of the principle of equidistance from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

3. In delimiting the boundaries of the continental shelf, any lines which are drawn in accordance with the principles set out in paragraphs 1 and 2 of this article should be defined with reference to charts and geographical features as they exist at a particular date, and reference should be made to fixed permanent identifiable points on the land.

Article 7: The provisions of these articles shall not prejudice the right of the coastal State to exploit the subsoil by means of tunneling irrespective of the depth of water above the subsoil.

Article 8: The Convention shall until 31 October 1958, be open for signature by all States Member of the United Nations or of any of the specialized agencies and by any other State invited by the General Assembly of the United Nations to become a Party to the Convention.

Article 9: This Convention is subject to ratification. The instruments of ratification shall be deposited with the Secretary-General of the United Nations.

Article 10: This Convention shall be open for accession by any States belonging to any of the categories mentioned in article 8. The instruments of accession shall be deposited with the Secretary-General of the United Nations.

Article 11: 1. This Convention shall come into force on the thirtieth day following the date of deposit of the twenty-second instrument of ratification or accession with the Secretary-General of the United Nations.

2. For each State ratifying or acceding to the Convention after the deposit of the twenty-second instrument of ratification or accession, the Convention shall enter into force on the thirtieth day after deposit by such State of is instrument of ratification or accession.

Article 12: 1. At the time of signature, ratification or accession, any State may make reservations to articles of the Convention other than to articles 1 to 3 inclusive.

2. Any Contracting State making a reservation in accordance with the preceding paragraph may at any time withdraw the reservation by a communication to that effect addressed to the Secretary-General of the United Nations.

Article 13: 1. After the expiration of a period of five years from the date on which this Convention shall enter into force, a request for the revision of this Convention may be made at any time by any Contracting Party by means of a notification in writing addressed to the Secretary-General of the United Nations.

2. The General Assembly of the United Nations shall decide upon the steps, if any, to be taken in respect of such request.

Article 14: The Secretary-General of the United Nations shall inform all States Members of the United Nations and the other States referred to in article 8:

(*a*) Of signatures to this Convention and of the deposit of instruments of ratification or accession in accordance with articles 8, 9 and 10;

(*b*) Of the date on which this Convention will come into force, in accordance with article 11;

(*c*) Of requests for revision in accordance with article 13;

(*d*) Of reservations to this Convention, in accordance with article 12.

Article 15: The original of this Convention, of which the Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send certified copies thereof to all States referred to in article 8.

IN WITNESS WHEREOF the undersigned Plenipotentiaries, being duly authorized thereto by their respective Governments, have signed this Convention.

DONE at Geneva, this twenty-ninth day of April one thousand nine hundred and fifty-eight.

APPENDIX B TO STATEMENT OF NORTHCUTT ELY

THE LEGISLATIVE HISTORY (OR "TRAVAUX PREPARATORIES") OF THE 1958 CONVENTION ON THE CONTINENTAL SHELF[1]

The background and history of the Convention comprises primarily these events:

1. On September 28, 1945, President Truman signed a proclamation[2] whose operative language read:

> ". . . the United States regards the natural resources of the subsoil and the sea bed of the continental shelf beneath the high seas but contiguous to the coasts of the United States, as appertaining to the United States, subject to its jurisdiction and control."

The reasons he gave were these:

> ". . . the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just, since the effectiveness of measures to utilize or conserve these resources would be contingent upon cooperation and protection from the shore, since the continental shelf may be regarded as an extension of the landmass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a seaward extension of a pool or deposit lying within the territory, and since self-protection compels the coastal nation to keep close watch over activities off its shores which are of the nature necessary for the utilization of these resources."

President Truman's proclamation did not relate these reasons to any specified depth of water. At that time, except for wells drilled from piers off California, no offshore well was in production in this country. The first one was brought in, in 50 feet of water, in Louisiana, in 1947.

Some two score nations quickly followed suit with proclamations of offshore jurisdiction.

2. In 1951 the International Law Commission, which had been established by the Assembly of the United Nations to promote the development and codification of international law, submitted a report on the high seas after its third session. This 1951 report recommended that the coastal nations should have control and jurisdiction over the natural resources of a "continental shelf," defined as referring to

> ". . . the seabed and subsoil of the submarine areas contiguous to the coast, but outside the area of territorial waters, where the depth of the superjacent waters admits of the exploitation of the natural resources of the seabed and subsoil."[3]

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[1] The writer is indebted to Luke W. Finlay, Cecil J. Olmstead, and Oliver L. Stone for access to their research materials in preparing this appendix on legislative history, and the following appendix on national practice. A more complete account appears in the Report of the National Petroleum Council's Committee on Petroleum Resources Under the Ocean Floor, March 1969.

[2] The Truman Proclamation of September 28, 1945, titled "Policy of the United States with respect to Natural Resources of the Subsoil and Seabed of the Continental Shelf," 10 Fed. Reg. 12303.

[3] International Law Commission (ILC) Yearbook (1951), Vol. II, p. 141.

3. The same Commission, in 1953, following its fifth session, produced another report. In this 1953 report the Commission reversed itself, and defined coastal jurisdiction solely in terms of water depth, using 200 metres as the outside limit, as follows:

> ". . . the seabed and subsoil of the submarine areas contiguous to the coast, but outside the area of the territorial sea, to a depth of two hundred metres." [4]

The exploitability criterion was dropped.

4. This new limitation proved unacceptable to the Organization of American States.

In March 1956, the 20 American nations convened at Ciudad Trujillo to consider the Commission's 1953 draft. These 20 nations were wholly dissatisfied with the International Law Commission's about-face. They unanimously adopted a resolution reciting that:

> "The sea-bed and subsoil of the continental shelf, *continental and insular terrace*, or other submarine areas, adjacent to the coastal state, outside the area of the territorial sea, and to a depth of 200 meters, or, *beyond that limit*, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the sea-bed and subsoil, appertain excessively to that state and are subject to its jurisdiction and control." (Emphasis added.) [5]

The conference's report, underlying that resolution, explained "continental terrace" as meaning this: ". . . 'Continental terrace' is understood to be that part of the submerged land mass that forms the shelf and the slope." [6]

In turn, it defined the "slope" to mean this: ". . . Scientifically, the term 'continental slope,' or 'inclination,' refers to the slope from the edge of the shelf *to the greatest depths*." (Emphasis added.)

The report made explicit just what the 20 American nations were objecting to in the International Law Commission's proposed restriction of their national jurisdiction to a water depth of 200 metres. It said:

> "I. The American states are especially interested in utilizing and conserving the existing natural resources *on the American terrace (shelf and slope)*.
>
> * * * * * * *
>
> "III. The utilization of the resources of the shelf cannot be technically limited, and for this reason the exploitation of the *continental terrace* should be included as a possibility in the declaration of rights of the American states." (Emphasis added.)

The American representative concurred in this report and resolution, with the concurrence of the Department of State.[7]

5. In 1956 the International Law Commission convened its eighth session, a few weeks after the close of the Ciudad Trujillo conference. The American position won. The Commission added to its 1953 definition (200 metres) the language proposed by the American nations, which extended coastal jurisdiction "beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources" of said areas. The spokesman for the 20 American nations, having won his point, dropped his request for specific reference to the continental terrace. The official report of the session states it this way:

> ". . . He did not wish to press the part of his amendment introducing the concept of the continental terrace, since the adoption of the second point relating to the depth at which exploitation was practical would automatically bring that area within the general concept." [8]

Professors McDougal and Burke, in their definitive work, "The Public Order of the Oceans," report the 1956 debate in the International Law Commission in this fashion:

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[4] ILC Yearbook (1953), Vol. II, p. 212. The Commission's records make it clear that the motivation for this action was not the conclusion that the coastal nations had no rights beyond the 200 metre depth, but rather that there was no urgency for allowing exploitation beyond that depth, and that a 200 metre depth limit had a desirable element of certainty.

[5] Resolution of Ciudad Trujillo, Inter-American Specialized Conference on Conservation of Natural Resources: The Continental Shelf and Marine Waters, Ciudad Trujillo: March 15–28, 1956.

[6] Committee I Report, Inter-American Specialized Conference, Conferences and Organizations Series No. 50, Pan American Union, at 34 (March 1956).

[7] Whiteman's Digest of International Law (Department of State 1965), Vol. 4, p. 837.

[8] ILC Yearbook (1956), Vol. I, p. 136.

"Some controversy attended the suggested elimination of the continental shelf term and the references to the 'continental and insular terrace,' but this became muted when it was realized that a criterion embracing both a 200-meter depth and the depth admitting exploitation would embrace such areas if they were in fact exploitable or came to be." (p. 683.)

The International Law Commission's 1956 report accordingly recommended to the United Nations Assembly draft articles for a convention which would recognize coastal jurisdiction not only to 200 metres (about 100 fathoms), but, as proposed by the American nations, "beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas."

The full text of the language recommended by the Commission to the General Assembly on this subject was contained in Article 67 of a proposed treaty dealing with other phases of the Law of the Sea as well as the continental shelf. It read:

"For the purposes of these articles, the term 'continental shelf' is used as referring to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres (approximately 100 fathoms), or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas." [9]

This final report of the Commission to the Assembly emphasized that this was in response to the Ciudad Trujillo declaration of the American states. The Commission said:

"At its eighth session, the Commission reconsidered this provision [i.e., the 200 metre limit agreed on by the Commission in 1953]. It noted that the Inter-American Specialized Conference on 'Conservation of Natural Resources: Continental Shelf and Oceanic Waters,' held at Ciudad Trujillo (Dominican Republic) in March 1956, had arrived at the conclusion that the right of the coastal State should be extended beyond the limit of 200 metres, 'to where the depth of the superjacent waters admits of the exploitation of the natural resources of the seabed and subsoil.' Certain members thought that the article adopted in 1953 [the 200 metre limit] should be modified. . . . . While maintaining the limit of 200 metres in this article as the normal limit corresponding to present needs, they wished to recognize forthwith the right to exceed that limit if exploitation of the seabed or subsoil at a depth greater than 200 metres proved technically possible. . . . Other members contested the usefulness of the addition, which in their opinion unjustifiably and dangerously impaired the stability of the limit adopted. The majority of the Commission nevertheless decided in favor of the addition." [10]

The Commission went on to say:

"While adopting, to a certain extent, the geographical test of the 'continental shelf' as the basis of the juridical definition of the term, the Commission therefore in no way holds that the existence of a continental shelf, in the geographical sense as generally understood, is essential for the exercise of the rights of the coastal State as defined in these articles. . . . Again, *exploitation of a submarine area at a depth exceeding 200 metres is not contrary to the present rules, merely because the area is not a continental shelf* in the geological sense." [11] (Emphasis added.)

6. The United Nations Conference on the Law of the Sea convened in Geneva in February 1958 to consider the recommendations of the International Law Commission. Representatives of 82 nations attended. The conference separated out the Commission's articles into four conventions, one on the High Seas, another on the Territorial Sea and Contiguous Zone, another on the Living Resources of the Sea, and the Convention on the Continental Shelf.

In support of the language recommended by the Commission, with respect to coastal nations' jurisdiction beyond the 200 metre isobath, a member of the American delegation told the Conference:

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[9] ILC Yearbook (1956), Vol. II, p. 296.
[10] ILC Yearbook (1956), Vol. II, pp. 296–97.
[11] ILC Yearbook (1956), Vol. II, p. 297.

"The definition of the rights of the coastal State to the continental shelf *and continental slope* adjacent to the mainland proposed by the International Law Commission would benefit individual States and the whole of mankind." [12] (Emphasis added.)

The Conference approved the recommended language of Article 67 of the Commission draft, as Article 1 of the Convention on the Continental Shelf, after eliminating the parenthetical reference to 100 fathoms as equivalent to 200 metres, and adding language making the convention applicable to submarine areas adjacent to the coasts of islands.

In one of the final acts of the Conference, in plenary session, a motion was made to cut coastal jurisdiction back to the 200 metre isobath, as recommended by the Commission in 1953. It was rejected by the Conference by a vote of 48 to 20, with two abstentions.[13]

Representatives of our Nation and 45 others then signed the Convention.

7. Article 11 of the Convention provided that it should come into force on the 30th day following deposit of the 22nd ratification or accession with the United Nations. This required until June 10, 1964.[14]

The State Department submitted the Convention to the President on September 2, 1959. It told him that the Convention "combines both the depth and exploitability tests as did the International Law Commission's draft." [15]

In submitting the Convention to the Senate in 1960 the Department was even more explicit. Its spokesman was Arthur H. Dean, who had been chairman of the United States delegation at the 1958 conference. He told the Senate Committee on Foreign Relations:

"The clause which protects the right to utilize advances in technology at greater depths beneath the oceans was supported by the United States and *was in keeping with the inter-American conclusions at Ciudad Trujillo in 1956. It was included in the I.L.C. 1956 draft.*" [16] (Emphasis added.)

The Senate accordingly gave its consent, and the President ratified the Convention March 24, 1961.[17]

Conclusion

Artiel 2(1) of the Convention on the Continental Shelf states that the coastal State exercises over the "continental shelf" sovereign rights for the purpose of exploring it and exploiting its natural resources.

Article 1 defined the term "continental shelf" as referring:

". . . to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, *beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas. . . .*" (Emphasis added.)

It is clear that the emphasized language (1) was added on the demand of the 20 American states; (2) was in response to their insistence that exclusive coastal jurisdiction should encompass the continental terrace, both shelf and slope, "to the greatest depths"; (3) was concurred in and advocated by the State Department in the 1956 Ciudad Trujillo conference of the American states, with the interpretation that this language accomplished that result; (4) was accepted by the International Law Commission in 1956 as recognizing exclusive jurisdiction in the coastal State in adjacent waters to whatever depth is exploitable; (5) was recommended by the State Department to the 1958 conference which produced the Convention on the Continental Shelf with the explanation that it encompassed both "shelf and slope"; and (6) was represented by the State Department to the President and Senate as being "in keeping with the inter-American conclusions at Ciudad Trujillo in 1956."

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[12] Official Records of the U.N. Conference on the Law of the Sea, Vol. VI: Fourth Committee, U.N. Doc. A/Conf. 13/42 (1958), p. 40.

[13] Official Records of U.N. Conference on the Law of the Sea, Vol. II: Plenary Meetings. U.N. Doc. A/Conf. 13/38 (1958), p. 13.

[14] See Proclamation of President Johnson so stating, May 25, 1964: T.I.A.S. 5578, p. 55. Article 13 provides that after expiration of five years from the date on which the convention enters into force, a request for revision may be made by any contracting party by notice in writing to the Secretary General of the United Nations. This date is thus June 10, 1969.

[15] Letter of Acting Secretary of State Dillon transmitting the Convention to President Eisenhower, September 2, 1959.

[16] Hearings before the Senate Committee on Foreign Relations, "Conventions on the Law of the Sea," 86 Cong., 2d Sess., Jan. 20, 1960, pp. 108–09.

[17] See T.I.A.S. 5578.

APPENDIX C TO STATEMENT OF NORTHCUTT ELY

EXTRACTS FROM THE JUDGMENT OF THE INTERNATIONAL COURT OF JUSTICE IN THE NORTH SEA CONTINENTAL SHELF CASES (GERMANY/DENMARK, GERMANY/NETHERLANDS), 1969 REP. I.C.J. 1 (20 FEB. 1969)

19. More important is the fact that the doctrine of the just and equitable share appears to be wholly at variance with what the Court entertains no doubt is the most fundamental of all the rules of law relating to the continental shelf, enshrined in Article 2 of the 1958 Geneva Convention, though quite independent of it,—namely that the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exist *ipso facto* and *ab initio*, by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources. In short, there is here an inherent right. In order to exercise it, no special legal process has to be gone through, nor have any special legal acts to be performed. Its existence can be declared (and many States have done this) but does not need to be constituted. Furthermore, the right does not depend on its being exercised. To echo the language of the Geneva Convention, it is "exclusive" in the sense that if the coastal State does not choose to explore or exploit the areas of shelf appertaining to it, that is its own affair, but no one else may do so without its express consent.

41. As regards the notion of proximity, the idea of absolute proximity is certainly not implied by the rather vague and general terminology employed in the literature of the subject, and in most State proclamations and international conventions and other instruments—terms such as "near", "close to its shores", "off its coast", "opposite", "in front of the coast", "in the vicinity of", "neighbouring the coast", "adjacent to", "contiguous", etc.—all of them terms of a somewhat imprecise character which, although they convey a reasonably clear general idea, are capable of a considerable fluidity of meaning. To take what is perhaps the most frequently employed of these terms, namely "adjacent to", it is evident that by no stretch of imagination can a point on the continental shelf situated say a hundred miles, or even much less, from a given coast, be regarded as "adjacent" to it, or to any coast at all, in the normal sense of adjacency, even if the point concerned is nearer to some one coast than to any other. This would be even truer of localities where, physically, the continental shelf begins to merge with the ocean depths. Equally, a point inshore situated near the meeting place of the coasts of two States can often properly be said to be adjacent to both coasts, even though it may be fractionally closer to the one than the other. Indeed, local geographical configuration may sometimes cause it to have a closer physical connection with the coast to which it is not in fact closest.

42. There seems in consequence to be no necessary, and certainly no complete, identity between the notions of adjacency and proximity; and therefore the question of which parts of the continental shelf "adjacent to" a coastline bordering more than one State fall within the appurtenance of which of them, remains to this extent an open one, not to be determined on a basis exclusively of proximity. Even if proximity may afford one of the tests to be applied and an important one in the right conditions, it may not necessarily be the only, nor in all circumstances, the most appropriate one. Hence it would seem that the notion of adjacency, so constantly employed in continental shelf doctrine from the start, only implies proximity in a general sense, and does not imply any fundamental or inherent rule the ultimate effect of which would be to prohibit any State (otherwise than by agreement) from exercising continental shelf rights in respect of areas closer to the coast of another State.

43. More fundamental than the notion of proximity appears to be the principle—constantly relied upon by all the Parties—of the natural prolongation or continuation of the land territory or domain, or land sovereignty of the coastal State, into and under the high seas, via the bed of its territorial sea which is under the full sovereignty of that State. There are various ways of formulating this principle, but the underlying idea, namely of an extension of something already possessed, is the same, and it is this idea of extension which is, in the Court's opinion, determinant. Submarine areas do not really appertain to the coastal State because—or not only because—they are near it. They are near it of course; but this would not suffice to confer title, any more than, according to a well-established principle of law recognized by both sides in the present case,

mere proximity confers *per se* title to land territory. What confers the *ipso jure* title which international law attributes to the coastal State in respect of its continental shelf, is the fact that the submarine areas concerned may be deemed to be actually part of the territory over which the coastal State already has dominion—in the sense that, although covered with water, they are a prolongation or continuation of that territory, an extension of it under the sea. From this it would follow that whenever a given submarine area does not constitute a natural—or the most natural—extension of the land territory of a coastal State, even though that area may be closer to it than it is to the territory of any other State, it cannot be regarded as appertaining to that State—or at least it cannot be so regarded in the face of a competing claim by a State of whose land territory the submarine area concerned is to be regarded as a natural extension, even if it is less close to it.

Appendix D to Statement of Northcutt Ely

U.S. Energy Outlook: An Initial Appraisal, 1971–1985: Summary, pp. xvii–xxii, National Petroleum Council, November 1971

This report summarizes the National Petroleum Council's "Initial Appraisal" of the U.S. energy outlook through 1985. Supply-demand relationships are projected assuming that current government policies and regulations[1] and the present economic climate for the energy industries would continue without major changes throughout the 1971–1985 period.[2]

Assumptions of initial appraisal

In line with maintenance of a basic "status quo," it was assumed that:

1. Recent physical levels of oil exploration and development drilling activity and exploration success trends would continue into the future.
2. The level of capital investment in gas exploration and development drilling activity would remain relatively constant and the past trends in the results of such activity would provide the basis for future expectations.
3. After domestic oil production capacity is reached, remaining requirements would be satisfied by imports. It was also assumed that political, economic and logistical considerations would not restrict the availability of foreign oil.
4. All presently feasible sources of gas supply, domestic and foreign, would be utilized. It was also assumed that political, economic and logistical considerations would not restrict the availabilty of foreign gas.
5. Nuclear power would be utilized to the maximum extent consistent with a feasible development program.
6. Coal production would rise to the degree necessitated by demand and technological advances would permit coal producers and consumers to meet environmental requirements.

These assumptions are generally optimistic. In view of past trends, the assumed levels of oil and gas exploratory activity, in particular, are not likely to be realized without substantial improvements in economic conditions and government policies. Similarly, the availability of foreign oil to meet shortfalls in domestic supplies cannot be assured. Significant limitations could arise for political or logistical reasons.

This initial appraisal, therefore, is not *a forecast of what will probably happen in the future, and it should not be so interpreted. It is solely a set of projections, reflecting an optimistic view of what might happen without major changes in present government policies and economic parameters. These projections will be used as reference points by the Committee in its subsequent task of identifying and evaluating the changes in government policies and economic conditions which might contribute to an improved national energy posture.*

Findings of the initial appraisal

In the initial appraisal, an assessment was made of total U.S. energy consumption by market sectors.[3] The Subcommittees for Oil, Gas and Other Energy

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[1] Particularly in respect to oil import controls, natural gas price regulation, leasing of federal lands, environmental controls, tax rates and research funding.

[2] This analysis relates to government policies prior to the President's June 4, 1971, Energy Message to Congress.

[3] for an assessment of requirements by geographic area as well, see Chapter One, Volume II.

Resources made independent assessments of the individual fuels involved. They applied their respective judgments in deciding what factors would affect demand for the particular fuel examined and took into account the probable supply of other fuels. From these projections, the Coordinating Subcommittee developed an energy supply-demand balance. The principal findings of the initial appraisal, made under the assumed conditions summarized above, were as follows:

1. *Energy Consumption.*—U.S. energy consumption would grow at an average rate of 4.2 percent per year during the 1971–1985 period. The respective growth rates by market sectors would be as follows: electric utilities, 6.7 percent; nonenergy uses, 5.4 percent; transportation, 3.7 percent; residential and commercial, 2.5 percent; and industrial, 2.2 percent.

2. *Domestic Energy Supplies in Relation to Consumption.*—In 1970 domestic energy supplies satisfied 88 percent of U.S. energy consumption. Under the assumptions of the initial appraisal, domestic supplies would grow at an average rate of 2.6 percent per year during the 1971–1985 period. Since domestic supplies would increase at a slower rate than domestic demand, the nation would become increasingly dependent on imported supplies. By 1985, domestic supplies would take care of about 70 percent of U.S. consumption.

3. *Petroleum Liquids.*—Domestic supplies, consisting of crude oil, condensate and natural gas liquids, totaled 11.3 million barrels a day (B/D) in 1970, which was 21 percent of total energy consumption. Despite the addition of an estimated 2.0 million B/D from the Alaskan North Slope and another 2.7 million B/D from new discoveries to be made after 1970, total U.S. production in 1985 was estimated at only 11.1 million B/D. Therefore, in order to meet growing demands for petroleum liquids, imports would have to increase more than fourfold by 1985, reaching a rate of 14.8 million B/D in that year. Assuming the availability of foreign supply, oil imports would then account for 57 percent of total petroleum supplies and would represent 25 percent of total energy consumption. Most of the imports would have to originate in the Eastern Hemisphere because of the limited potential for increased imports from Western Hemisphere sources.

4. *Gas.*—In the absence of supply limitations, potential gas demand would approximately double between 1970 and 1985, reaching a level of about 38.9 trillion cubic feet (TCF) per annum. Under current regulatory policies and federal leasing policies, however, the supplies of domestic natural gas (excluding North Slope) could be expected to fall from 21.82 TCF in 1970 to 13.00 TCF in 1985. By this time, another 1.50 TCF would be contributed by the Alaskan North Slope and 0.91 TCF from synthetic gas manufactured from coal and naphtha; meanwhile, imports from Canada could provide 1.15 TCF and imports of LNG and LPG could furnish an additional 4.93 TCF.[4] Taking all of these sources into account, 1985 supplies would total only 21.49 TCF, or 1.25 TCF less than 1970 supplies of 22.74 TCF. Dependency on imports would rise from 4 percent of gas supplies in 1970 to more than 28 percent in 1985, assuming the availability of foreign supply. The shortfall in energy supply between potential gas demand and available gas supplies would have to be made up from increased supplies of other fuels.

5. *Coal.*—Supply of domestic coal, including exports, would increase from 590 million tons in 1970 to 1,071 million tons in 1985. Coal reserves were judged ample and could support a faster growth rate in production. Potential constraints, however, were seen as being the availability of manpower and transportation facilities, health and safety regulations, and the need to develop a commercially proven technology for control of sulfur dioxide emissions.

6. *Nuclear.*—Nuclear power supply would increase from 23 billion kilowatt hours (KWH) in 1970 to 2,067 billion KWH in 1985. This is consistent with estimates of the Atomic Energy Commission. Achievement of this level would depend primarily on resolving delays from siting, environmental and construction problems. No shortage of domestic fuels was foreseen, assuming prices for U_3O_8 up to $10 per pound. By 1985, nuclear energy would be supplying 48 percent of total electric power requirements.

7. *Other Fuels.*—The remaining fuels—hydropower, geothermal power and synthetic crude from shale—would together contribute only 3 per-

[4] Supplies from all the sources mentioned could be made available only at prices substantially above those postulated for production of domestic natural gas under the assumptions of this initial appraisal.

cent of energy requirements in 1985. Ceilings on the output of the first two would be imposed by physical limitations. Ceilings on the output of synthetic crude would be limited by government policy on leasing land, economics and technology: consequently only about 100,000 B/D would be obtainable from oil shale.

8. *Capital Requirements.*—In order to achieve the initial appraisal energy balance, capital outlays for resource development, manufacturing facilities and primary distribution in the United States would have to total approximately $375 billion over the 1971–1985 period.[5] Not included in this estimate were other major sums for petroleum marketing, gas and electricity distribution, and the development of overseas natural resources needed to satisfy U.S. import requirements.

Implications of the Initial Appraisal

In the long run, all indigenous energy supplies that can be developed will be needed. Potential U.S. energy resources could physically support higher growth rates from domestic supplies than shown in this initial appraisal, particularly for coal, nuclear fuels, petroleum liquids and natural gas. U.S. coal reserves are ample to meet foreseeable needs. The quantity of original oil and gas in place, as estimated in the NPC report[6] on future U.S. petroleum provinces, exceeds the total of cumulative oil and gas production to date and the domestic demand for oil and gas projected in this appraisal. Also, the combined total of currently proven and potentially discoverable oil and gas as estimated in that report is above projected needs during the study period interval. It is extremely important to note, however, that these resources are not likely to be developed to their full potentials under the "status quo" assumption regarding government policies and economic conditions. For example, using the discovery rate projected in the initial appraisal, it would take almost a century to find the estimated discoverable oil projected in the referenced study.

Since the mid-1950's the growth rate for domestic petroleum production has slackened, while that for imports of petroleum has increased. As a result, incentives and prospective profitability for exploration and development of hydrocarbon resources in the United States have decreased.[7] In the last few years, there has been a higher rate of growth in the market for domestic oil, but the "real" price of crude oil still remains below the level of the decade earlier.

Based on historical precedent, the assumption of U.S. oil and gas prices continuing at recent levels indicates that supplies of domestic oil and natural gas will decline in the future. However, an improved economic climate would encourage (1) increased exploration for new reserves of oil and gas and (2) increased recovery of oil from known reserves.

The extent to which indigenous supplies could be increased by these and other changes was not considered in this initial appraisal, but will be assessed in the final report scheduled for completion in July 1972.

At this time, it is appropriate only to note certain areas of concern that are implicit in the continuation of existing conditions. These items can be conveniently placed in four groups:

1. *Government Policies*—Continuation of present government policies, particularly in respect to leasing of federal lands, environmental controls, health and safety, tax rates, research funding, natural gas price regulation, and import policies, clearly will result in a sharp rise in national dependence on imported energy sources, particularly petroleum liquids. This will require careful assessment, in respect to both national security aspects and the impact on the U.S. balance of payments. Furthermore, the United States cannot expect indefinitely to be able to increase imports of foreign oil. Towards the end of the century, foreign oil supplies may prove insufficient to meet all potential demands.

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[5] Excludes capital outlays for Alaskan North Slope exploration, development and production. Includes capital outlays of $200 billion for electric power plants and transmission lines.

[6] As idicated in the NPC report *Future Petroleum Provinces of the United States* (July 1970), *if* discovered and produced, future production of crude oil would be 346 billion barrels (4.0 times past production) and future production of natural gas would be 1,195 trillion cubic feet (3.6 times past production). The discovery and commercial development of these potential resources will, however, take many decades and require major improvements in economic incentives.

[7] For further discussion of effect of economic factors in 20 years after World War II, see the report of the National Petroleum Council, *Factors Affecting U.S. Exploration, Development and Production*, dated January 31, 1967.

Continuation of present government policies will also result in available gas supplies being equal to only about one-half of market requirements in 1985. In view of the indicated availability of substantial undiscovered domestic reserves, a critical review of natural gas regulations and other parameters impinging on the incentives for expanded exploratory efforts is clearly in order and urgently needed.

2. *Physical Facilities*—The satisfaction of the nearly doubled energy requirements of 1985 will require enormous additions of new facilities, which will not easily be forthcoming under existing political, social and economic conditions. *In petroleum*, the importation of an incremental 10–11 million B/D of overseas crude oil and products above the 1970 level would require more than 350 tankers, each of 250,000 deadweight tonnage (DWT). No U.S. ports are presently equipped to receive such tankers, so new terminals would have to be developed in coastal areas. Similarly, the increase in refined products requirements would necessitate net additions of about 10 million B/D to domestic refining capacity over the 15-year period. This would involve construction at about 2.5 times the rate of the past decade. *In gas*, the importation of 4 TCF of LNG annually by 1985 would require the building of 120 tankers each having a maximum capacity equivalent of approximately 790,000 barrels. In addition, such operations would require the building of liquefaction plants at the loading terminals and the building of unloading terminals, regasification plants and storage and transportation facilities at points of delivery. *In coal*, the doubling of mine output would involve the development of Western coal reserves with associated transportation to markets as well as expanded development of underground mines in the East and Midwest. *In nuclear power*, the pace of construction of new plants would have to rise very sharply from recent levels, reaching a capability of bringing thirty 1,000-megawatt plants on line each year from 1980 through 1985.

3. *Financial Requirements*—Annual new investment required to finance development of natural resources and construction of new facilities would greatly exceed the levels of recent years. Funds provided from operations of energy industries at present price levels would fall far short of meeting these capital requirements. Environmental regulations affecting the supply, transportation and consumption of all fuels would further increase investment costs. All these things indicate increasing energy costs.

4. *Technology*—The doubling of energy consumption over the next 15 years implies a sharp step-up in all kinds of measures needed to protect the environment, both at the points of energy production and use. The urgent need for energy also provides varied research challenges, including problems such as new coal mining methods, new exploratory techniques, new methods of increasing the recovery of oil and gas, new energy transportation methods, advanced nuclear technology, and the development of commercial processes for flue-gas desulfurization and for manufacture of synthetic liquid and gaseous fuels from oil shale and coal.

Finally, it should be noted that long lead times are involved in the orderly development of energy resources. Therefore, it is essential that the many considerations bearing on the selection of an optimum national energy posture be brought into sharp focus at the earliest possible date. In its final report on the U.S. energy outlook, the National Petroleum Council will seek to provide as much pertinent material as possible, including analyses of alternatives open to both government and industry.

Additional studies

The NPC Committee on U.S. Energy Outlook has already started to develop additional analyses of changes in industry and/or government programs and policies and changes in economic conditions which would lead to the following effects:

1. Increase indigenous energy supplies; 2. Enhance the environment; 3. Maintain the security of the nation's energy supplies; 4. Increase efficiency in the production and use of fuels, particularly through technological research and development.

In the process of this additional work, special attention will be given to costs, including the range of cost increases involved in various steps to improve the energy supply situation, and the resultant impact of such increases on demand. The Committee recognizes that price levels will have a significant impact on both the supply of and demand for various energy resources; an effort will be made to evaluate the elasticity of demand and supply for each major type of energy.

Appendix E to Statement of Northcutt Ely

Prospects for and from deep ocean mining[1]

(By F. L. LaQue[2])

Introduction

Expectations of considerable revenues form the exploitation of the mineral resources of the oceans have generated a great deal of discussion during the past few years. These expectations have, no doubt, been an important factor in stimulating plans for the conference "Pacem in Maribus" being organized by the Center for the Study of Democratic Institutions to be held in Malta in June, 1970.

Up to now, the discussions have concentrated heavily on how exploration and exploitation of the anticipated resources should be made subject to some form of international regulation and how the revenues from exploitation should be applied for what is referred to as "the benefit of mankind". This is based on the concept that deep ocean mineral resources represent a "common heritage" which should be held in trust by the international community so that the wealth to be derived from exploitation of this heritage will be applied properly.

There are some, also, who feel that the distribution of the derived wealth should be directed towards redressing the imbalance of prosperity that exists between what are called the "developed" and the "developing" nations of the world.

One suggested possibility would be a wild international scramble among the highly developed nations to become dominant in the exploitation of these resources. This would have the effect of aggravating international tensions and through the advantage of their advanced technology would make the developed nation even more prosperous relative to the developing ones.

The other suggested possible result has been described as flowing from an enlightened international social conscience with general recognition that the existence of substantial, often called tremendous, new resources in the ocean provides mankind with a splendid opportunity to organize the exploitation of these resources so as to eliminate any possibility of increased international tensions and to distribute the derived wealth for the "maximum benefit of mankind" with special concern for "developing" nations.

The purpose of this paper is to review the prospects *for* the exploitation of deep ocean metals and to examine the prospects of achieving the international goals that have been proposed *from* the exploitation of these metal resources.

Prospects for deep ocean mining

This discussion will deal only with metals or what are sometimes called "hard minerals" to distinguish these from such other minerals as petroleum, natural gas, sulfur, and phosphorites. Such other ocean "minerals" as sand, gravel, diamonds and precious coral will also be excluded.

Deep ocean vs near shore deposits

Since we shall be talking about ocean mineral resources that may become subject to some sort of international regime we must have some notion as to the probable location of its boundaries, as this will determine the nature and location of the resources that may be exploited within such a regime.

The limits of national jurisdiction of coastal nations over the resources of the seabed were presumably established by the 1958 Geneva Convention on the Continental Shelf. The limit established by a water depth of 200 meters was made much more imprecise by extending the limit to any depth capable of exploitation subject to a further limitation in terms of a criterion of adjacency to the coastal state claiming jurisdiction.

Experience has shown that each country is likely to have its own interpretation of the provisions of the convention in extending its limits of jurisdiction beyond the 200 meter depth line.

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[1] Based on a paper originally provided for Preparatory Conference on the Role of Enterprises in an Ocean Regime for the Pacem in Maribus Conference in Malta, June, 1970, organized by the Center for the Study of Democratic Institutions, Santa Barbara, Calif. April 1–3, 1970.

[2] Vice President (Retired) International Nickel Company, Inc., 67 Wall Street, New York, and Senior Lecturer, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, California.

The technology for drilling oil wells has already advanced well beyond the 200 meter depth limit in the form of exploratory wells. Production is being accomplished at a depth of about 310 feet (100 meters).

Recent discussion and assertions have suggested that the outer limit of national jurisdiction over the seabed resources of a continental shelf should be at the seaward edge of a continental slope as a natural prolongation of a continental land mass at depths as great as 2500 meters [1, 2.]

So far as the "hard minerals" being dealt with in this paper are concerned, the prospect for their potentially profitable mining beyond the 200 meter depth line is not significantly different from the prospect beyond the 2500 meter line. Consequently, the probable location of the boundary of national jurisdiction is not considered to be a significant factor in estimating the future value of exploitation of "hard mineral" resources that might become subject to international jurisdiction.

This brings us to quesions as to what minerals exist and are possibly recoverable from, or below, the ocean bottom outside the limits of the national jurisdictions of coastal nations and at depths probably in excess of 2500 meters.

It seems safe at this time to eliminate any consideration of the possibility of mining operations resembling those undertaken on shore and involving sinking of shafts leading to underground excavations of mineralized veins or zones. The eventual technical feasibility of such operations has been asserted by Carl F. Austin [3] in an interesting paper. Such operations would be difficult and expensive enough in relatively shallow coastal waters which would be within limits of national jurisdiction and are quite unlikely to be undertaken in the deep ocean in the foreseeable future.

Preston Cloud [4] has pointed out that "modern theory of sea floor spreading implies that beneath a thin veneer of later sediments the ocean basins are generally floored with relatively young and sparsely mineralized basaltic rock." This is consistent with a similar conclusion by Harold James [5].

The extension of underground mining into deep international waters appears to be an extremely remote possibility which need not engage our further attention on this occasion.

Placer like deposits of gold, silver, platinum, tin and diamonds eroded from onshore mineral deposits and carried into the ocean by streams cannot be expected to extend beyond limits of national jurisdiction which will encompass the lowest sea level in geologic times [2]. This is the case also of mineral rich beach sands containing valuable concentrations of titanium, zirconium and iron.

So far as elements dissolved in seawater are concerned, commercial exploitation has been limited to magnesium, bromine and common salt. Since these are readily available from coastal waters under national jurisdiction they need not be considered in discussions of the exploitation of deep sea minerals. The concentrations of other metals dissolved in seawater are so low that there is practically no chance of their profitable exploitation in view of the tremendous volumes of water that would have to be processed to recover any significant amount. For example, treatment of 500 million gallons per day would yield only about ten pounds of nickel. Concentrations of other metals of interest are of the same order of magnitude [6].

Metal enriched muds associated with hydrothermal activities such as have been explored in the Red Sea [7, 8] cannot be expected to be extensive enough, sufficiently rich in metals, and encountered in enough places to warrant consideration at this time as becoming a near future significant factor in the total exploitation of metals from the deep ocean and how this might be regulated. The same applies to consolidated vein or lode deposits that might occur at relatively shallow depths on ocean ridges [2, 5].

This leaves us manganese nodules lying on the ocean floor to represent the only deep ocean hard mineral resource that need be considered at this time. This view is supported by McKelvey, Tracy, Stoertz and Vedder [2] as per the following quotation: "The manganese nodules, in fact, are the only likely potential resource over much of the large ocean basins . . ."

This conclusion will account for the attention to be given to the metals in nodules in this paper.

MANGANESE NODULES

The existence of manganese nodules on the deep ocean floor has been known since the famous Challenger Expedition 1873–1876 [9].

Since then there have been numerous other explorations that have provided evidence of a very wide distribution of manganese nodules of varying composition and potential value. V. McKelvey and F. Wang of the U.S. Geological Sur-

vey [8] have recently published maps showing locations from which nodules have been recovered in exploratory surveys.

Only a very small fraction of the total ocean bottom area has been covered by the explorations undertaken so far.

The explorations to date have shown, also, that nodules of attractive metal content are most likely to be found at depths in excess of 12,000 feet (3600 meters).

DISTRIBUTION OF NODULES

There is considerable evidence [8] that nodules are likely to be found over broad areas. This would follow also from the general uniformity of the ocean water sources of the nodule constituents above large areas of the ocean bottoms.

The limited information available on the distribution, composition, physical character and setting of manganese nodules suggests that there may be locations in which these features could cause them to be characterized as "hot spots" of unusual attractiveness for exploitation. There is equal reason to believe that the areas of any such "hot spots" would be large and numerous enough to accommodate a number of exploitation activities simultaneously. This would moderate or even eliminate competition for concessions for exploitation of defined areas.

There are other justifications such as sound resource management practice for some instrumentality for knowing and keeping track of defined areas in which exploitation is being undertaken.

Factors beyond richness of a particular deposit of nodules that would make some areas more attractive than others, and thereby support a desire for a concession for tenure of a defined area include:

1. Proximity to potential markets for the metals recovered.
2. Nearness to sites of land-based beneficiation and refining plants as this would affect transportation costs.
3. Favorable meteorological and sea-state conditions.
4. Depth of water in which recovery operations would have to be undertaken.
5. Topography of bottom.
6. Soil mechanics of bottom.
7. Political stability and overall "business climate" and other incentives of adjacent coastal nations in which supplementary land-based operation would be undertaken.

VALUE OF NODULES

It seems quite unlikely that nodules will ever be sold in their raw form. Their commercial value will be established basically by the difference between the market value of the metals contained and extractable and the cost of finding and recovering the nodules, transporting them to refining plants, extracting the metals in marketable forms and marketing them. The profit on the overall operation is not easily related to the apparent value of the nodules at the site from which they may be recovered.

The total income that might be realized from all nodule exploitation operations that might be undertaken and the total area of ocean bottom that might be involved in such operations will be determined primarily by the composition.

A representative composition of a Pacific Ocean nodule containing high enough concentrations of metals to make them of possible commercial interest would be:

Manganese 25%; Nickel 1%; Copper 0.75%; Cobalt 0.25%.

A "typical" Atlantic Ocean nodule would contain:

Manganese 16%; Nickel 0.42%; Copper 0.20%; Cobalt 0.31%.

The inadequate number of analyses available for calculation of average metal contents and the limited significance of such averages for the purposes of this discussion will justify disregarding figures for average metal contents.

The iron content of nodules is too low (generally under 20%) to assign any value to iron in appraising the potential market value of metals in nodules.

The composition of a representative Pacific Ocean nodule of possible commercial attractiveness, previously shown, will serve as a basis for further calculations and discussion.

As mentioned previously, the metal content of nodules varies through wide limits over different areas of the ocean bottoms. As a broad generalization, sampling to date has shown that the maximum contents of valuable metals are most likely to be found in the Pacific Ocean rather than in the Atlantic, and that favorable areas in the Pacific can be expected to be the location of the most extensive nodule recovery operations.

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Unfortunately, it would appear that nodules of potentially attractive commercial value are most likely to be found at very great depths of water in the range from about 12,000 to 18,000 feet (3600 to 5400 meters).

Unfortunately, also, the ratio of the constituents of the metals in nodules is grossly out of balance with the world's current ability to consume these metals (See Table 1).

In some nodules the content of the associated metals will be high enough to make the manganese unsuitable for its major fields of application unless the associated metals are removed, yet so low that the amounts and value of the associated metals that might be recovered will be so much less than the cost of refining the manganese for their removal as to make nodules of such composition economically unattractive.

Reference was made previously to the disparity between the ratio of metals in nodules and the ratio of world demand for them. This disparity is documented in Table 1 and is illustrated most dramatically by noting that if the world's needs for copper were to be supplied completely from the exploitation of nodules there could be made available at the same time nearly twenty-five times as much manganese, fifteen times as much nickel, and one hundred thirteen times as much cobalt as the present market requires.

Many conclusions can be drawn from the data in Table 1.

Probably the most important conclusion should be that the revenue that might be expected to be derived from the exploitation of nodules cannot be calculated simply by adding up the values of the individual metals per ton of nodules on the assumption that there will be a market at current prices for all the metals in the nodules.

Other discussions of the effect of recovery of metals from nodules on the marketing of the metals involved have concentrated on what effect the entry of metals into the marketplace from this source might have on lowering the prices of the metals involved. Such calculations and predictions failed to take into account the more important question stemming from the date in Table 1 as to the extent to which the metals might be able to find a market at any price.

In the light of present knowledge there is no reason to expect that individual metals can be recovered from nodules at a cost less than that from land-based ore deposits. From this it follows that exploitation of nodules is likely to be economically attractive only if a market can be found for more than one of the metals present.

It seems unlikely that recovery of manganese from nodules will be economically attractive. [2, 11]

Therefore, we shouldn't assume that nodules will be exploited primarily as a source of manganese.

Depending on the process used, the form in which the manganese is made available and the cost of shipping to market, some value might be attached to the manganese nodules at a price that would probably be lower than existed before manganese from nodules was added to other sources of supply. On the other hand, the manganese may be considered to be like rock and discarded in the refining process so that no realizable value would be attached to the manganese content of nodules.

The economic attractiveness of manganese in nodules could be increased by a successful effort to develop large new uses for this metal. Such new uses should not be unduly competitive with the other metals associated with manganese in nodules if the goal of increasing the total value of nodules is to be achieved.

Efforts to make the market for manganese much less than almost wholly dependent on the level of production of steel have been, to say the least, unimpressive in the past. This should become an important research activity as a means of making the exploitation of nodules more attractive commercially.

The same consideration applies also to cobalt for which the effort to develop new uses has already been considerable but which could be expanded further as a contribution to the future of nodule exploitation.

Date in Table 2 shows the tonnage of nodules of the composition chosen for illustration that would have to be harvested, the areas of ocean bottom that would have to be exploited on the basis of two pounds of nodules per square foot, and the fractions of the total ocean bottom that would be exploited to produce metals from nodules to the extent of world production from land sources in 1967.

It can reasonably be anticipated that by the time exploitations of nodules becomes technologically and commercially feasible, the world's needs for the metals contained could be about twice the amounts used in 1967 as shown in Table 2.

The data in Table 1 suggest that a nodule exploitation operation aimed at satisfying a major share of the world demand for cobalt would encounter minimum difficulty in finding a market for the associated metals.

This suggests, further, that the early stages of nodule exploitation might well be on a scale geared to the world's needs for cobalt. The magnitude of the scale established on this basis as per the data in Table 2 would be represented by exploiting a maximum of about six and one-half million tons of nodules per year.

Exploitation at this level would yield about: 33 million pounds of cobalt; 4 million tons of manganese ore; 132 million pounds of nickel; 100 million pounds of copper.

Since it would not be realistic to assume that over 20% of the world market for manganese could be displaced immediately to accommodate manganese from nodules, and a serious question as to whether treatment of nodules for recovery of manganese would be economically attractive, we can reasonably assume that the real metal value of nodules in such an operation would be represented by their nickel, copper and cobalt contents, i.e. about $385,000,000 for the nodules required to meet the 1967 world production of cobalt.

This estimated gross revenue would be reduced by the cost of recovery, refining, etc. A net revenue before taxation of $80 million after subtracting costs would be optimistic. An assumed international tax rate of 50% would yield $40 million for possible distribution to developing nations. Giving value to the manganese would increase the tax revenue by only about $10 million.

There is also a question as to whether taxation for international purposes would be based on the total operation, of which part will be under national jurisdiction, including transportation and land based operations such as refining.

To satisfy 100% of the world's need for cobalt in 1967 would, as per Table 2, require harvesting nodules from an area of ocean bottom measuring only 236 square miles. This represents only 1.7 ten thousandths of one percent of the total ocean area.

The data in Table 2 show also that going to the unlikely extreme of abandoning all land-based sources of the metals involved and securing the world's needs for all these metals exclusively from ocean nodules would require harvesting of nodules from only about 0.02 percent of the ocean bottom each year. Stated another way, 1% of the ocean bottom could satisfy the 1967 world's needs for manganese, nickel, copper and cobalt for about 50 years.

In view of the data already available and the assumption of the existence of tremendous quantities of nodules estimated to be as much as 1.7 trillion tons in the Pacific [9] distributed broadly over large areas of ocean bottom, it would be reasonable to expect that if such a minute fraction of the ocean bottom will yield the total world need for the metals likely to be extracted, any regimes and regulations that may be established will have to deal only with relatively small areas being exploited simultaneously in a very small number of individual operations which need not and are not likely to interfere with each other where they may be undertaken.

The figures that have been cited can, of course, be challenged on the basis that the statistics available for the calculations represent the past rather than the future when exploitation of deep ocean nodules may be undertaken on a commercial scale.

World wide advances in industrialization with consequent increasing needs for the metals in nodules and higher selling prices for these metals can be expected. Both the quantities of metals that will be refined and their market values could double in the next twenty years.

Nevertheless, even with such or even greater increases, the areas of ocean bottom that might be exploited will remain relatively small and with a coincident increase in the world gross national product, the revenues to be derived from exploitation of nodules cannot be expected to have a significant effect on the balance of prosperity between the "developed" and the "developing" nations.

As mentioned previously, the extent to which nodules will be exploited as a source of the world's needs for the contained metals will be influenced by several factors to be discussed.

First will be the extent of presently known and new discoveries of land-based ores of equal or superior commercial attractiveness.

Data on known ore reserves for the principal metals in nodules are given in Tables 3, 4, 5 and 6 for manganese, copper, nickel and cobalt respectively. The number of years' supply represented by these reserves at the 1967 rates of production are summarized in Table 7.

The numbers of years' supply indicated by Table 7 are sure to be extended by continuing discoveries of new ore bodies on land and new techniques for recovering and treating lower grade ores. This would be offset by increases in world needs which may become twice what was required in 1967 by the time exploitation of nodules is undertaken on a commercial scale.

It can be concluded reasonably that the exploitation of deep sea nodules is not likely to take the form of a desperate attempt to make up for any near future exhaustion of land-based sources of the metals involved. This conclusion was reached also by V. E. McKelvey [10]

The data in Tables 3 to 6 also show the extent to which ores of the metals in nodules represent important resources of "developing" countries.

If the cost of recovering metals from deep sea nodules were to be less than from land-based ores, there would naturally be a very strong incentive to abandon land-based sources in favor of deep sea nodules.

There is no present evidence that recovery of metals from nodules will be more profitable than the exploitation of land-based ones. On the contrary, on the basis of their estimates of the capital costs of recovery equipment (dredges) and transportation, plus high refining costs, Sorensen and Mead concluded that at the present time the exploitation of nodules for their metal content cannot be expected to be profitable, even if credit is allowed for the manganese content. While this conclusion might be challenged as unduly pessimistic, it is reasonable to assert that the profitability of the exploitation of deep sea nodules remains to be demonsrated [10].

If, and when, the exploitation of metals from nodules may become commercially attractive, a limitation on the scale of operations may be imposed by some international action. Regulations may restrict the volume of production so as to conserve these resources or minimize undesirable disturbance of the opportunities to find a profitable market from land-based sources.

Any such steps should preferably deal with production from both land and sea sources rather than with either one alone. Otherwise, desirable encouragement of investment in exploration and exploitation of seabed resources would suffer from discriminatory limitation of seabed production.

Restraint may result from unwillingness of producers from land-based sources to abandon mines and processing facilities in which there is a tremendous capital investment. Simultaneously it would be necessary to raise the similarly tremendous amount of new capital that would be required for the exploitation of nodules. The magnitude of the capital requirements to deal with the very large tonnages of nodules that would have to be handled (Table 2) could run into billions of dollars for the total shown in Table 2.

There may also be effects of restrictions that may result from national and international restraints on potential exploiters designed to protect national sources of tax revenue and employment in mining and processing land-based ores in the countries of their origin. Countries currently having a major dependence of their prosperity on the exploitation of land-based ores might be expected to exert their influence in international bodies to restrain the exploitation of deep sea metals. This would be discouraging to investment in ocean mining as noted previously.

In some instances the exploitation of metals from nodules may be encouraged or expedited by nations which may wish for strategic reasons to become independent of remote sources of metals under the control of possibly unfriendly nations or subject to the hazards of long-distance transport. This urge will be restrained if there is a substantial increase in the cost of metals recovered from the sea as compared with land sources.

PROSPECTS FROM DEEP OCEAN MINING

In the introduction to this paper it was noted that there was hope in some quarters that the revenue from the exploitation of ocean mineral resources might be used to narrow the gap of prosperity between "highly developed" and "developing" nations.

Using the proceeds from exploitation of deep ocean metals from nodules for narrowing the gap of prosperity is likely to be a very complicated matter with a much more limited effect than has been suggested and counted upon.

In terms of "prosperity" the nations of the world are arranged in a very broad spectrum with no well or easily defined steps. It would be very difficult for any agency engaged in distributing tax revenue from deep ocean mining to decide which were the "developing" nations that were entitled to get something and how the total available should be allocated properly among them, e.g. in support of identified specific projects as has been suggested. Presumably, ways and means could be found to deal with this problem, if and when the funds available made this an important matter to be dealt with.

The gross national product of a country is a reasonable measure of its level of "prosperity."

The world-wide distribution of "gross national product" in 1967 is shown in Table 8.

For purposes of this discussion it is assumed that "developing" countries as candidates for distribution of revenues from deep ocean mining would be found in Latin America, South Asia, the Near East, the Far East (outside Japan), Africa (outside South Africa) and Oceania (outside Australia and New Zealand). The total Gross National Product for these areas in 1967, from Table 8 amounted to $291,254,000,000 or 12.6% of the total World Gross National Product.

The next question to be answered is: How much of the Total World Gross National Product is represented by the value of world production of the principal constituents of deep sea modules, i.e., manganese, copper, nickel and cobalt? These figures are given in Table 9.

From the figures in Tables 8 and 9 it can be calculated that the value of world production of manganese, copper, nickel and cobalt in 1967 represented only 0.28% of the World Gross National Product. The distributable revenue from taxation, 10% of the total value of production of these four metals would be about 0.028% of the world G.N.P.

It may be noted also that the total world production of these metals in 1967 had only about one-half the value of world catch of fish in that year.

It must be noted also that a substantial portion of the world's production of manganese, copper and cobalt comes from what might be called "developing" countries. Pertinent statistics on sources of these metals and the value of their production in each country are given in Tables 10, 11, 12 and 13.

While most of the world's nickel now comes from Canada the next largest amount comes from New Caledonia.

New nickel projects are in various stages of exploration and development in New Caledonia, Guatemala, Dominican Republic, Indonesia, the Philippines and the Solomon Islands. Australia can be added even though it has not been included in the list of "developing" nations.

It is evident from these data that substituting ocean for land, sources of the metals would detract from rather than advance the prosperity of the developing countries in which the land-based ores are located. The extent to which this might occur would be influenced by how much the world's needs for the nodule metals will have increased by the time the ocean becomes an important source. It will also be influenced by economics which might make ocean mining more attractive than land mining, especially to organizations that have no interest in land based sources.

If, as would be the case, only the revenue represented by some form of taxation of the "profits" from the exploitation of deep ocean metals is available for adjusting the relative prosperity of "developed" and "developing" nations the amount thus available, e.g. about 10% of the total market value of the metals, would represent only a little more than 0.025% of the world Gross National Product and only about 0.2% of the 1967 Gross National Product of the "developing" nations.

On a per capita basis it would amount to only 41 cents per person if it were to be divided equally among the total population, 1594.9 millions, of "developing" countries.

It should be evident, therefore, that even in the unlikely event that the deep ocean bottom would replace all land sources of manganese, copper, nickel and cobalt the assignable revenue from the exploitation of these deep ocean metals couldn't go very far in adjusting prosperity between "developed" and "developing" nations.

There could be a greater effect in reducing the prosperity of the "developing" nations which are now major sources of deep ocean metals, see Tables 10, 11, 12 and 13, and compare the current values of metal production with the 41 cents per capita possibly available from exploitation of deep ocean metals.

PRESENT STATUS OF DEEP OCEAN RECOVERY OF NODULES

Most of the current activities in the recovery of metals from deep ocean nodules can be characterized as examination of the technical and economic feasibility of various conceptual approaches. Some of these may lead to what might be called preliminary or pilot scale projects designed to demonstrate commercial feasibility that would warrant further investment. These will precede any full-scale commercial operations of which there are none at present. [10]

It seems likely that much of the current activity is aimed at providing a basis in advance for future decisions as to the choice between land-based and ocean bottom "ores" when new sources of ore may be needed, as for example when the per capita consumption of metals in "developing" nations begins to approach that of the "developed" ones.

CONCLUSIONS

1. The commercial scale exploitation of deep ocean nodules must await technological developments which will make this commercially attractive. This will take several years and probably will not occur before 1985.

2. There is a need for an international program of ocean exploration such as could be part of the International Decade of Ocean Exploration proposed by President Johnson of the U.S.A. in 1968 to confirm the extent and distribution and indicate the possible value of metals in deep ocean nodules.

3. In view of the probably small scale and small numbers of exploitation operations likely to be undertaken in the foreseeable future, any instrumentality or regulations that may be introduced should take this matter of scale and timing into proper account. The emphasis should be on providing a regulatory environment, either national or international, that will be an incentive to risky exploitation rather than a means of restraint associated with an effort to deal with unknown situations and circumstances that can be conceived but which may never be encountered.

4. While appropriate international regulations will be needed, their details should await the development of facts not yet in hand. An international law or regulation which could be described as a codification of practice could logically reflect reasonably precise knowledge of the practice that is to be codified. It should be flexible enough to take into account information acquired in the course of work directed toward commercial exploration and exploitation and should be designed to stimulate rather than restrain such activities.

5. In view of the lack of knowledge of the extent of revenues from the exploitation of nodules that might become available for taxation for the "benefit of mankind" and the probably small magnitude of funds that will be available for distribution in the foreseeable future, the prime emphasis in proposing an appropriate instrumentality should be an encouragement of exploration and the first stages of exploitation rather than on how to dispose of revenues.

6. The "developing" nations should not be encouraged to expect any substantial sums derived from the exploitation of deep ocean metals as a major component of the funds needed for their future development.

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ACKNOWLEDGMENT

The author records here his appreciation of the great help of Virginia W. Moore, of the Institute of Marine Resources, University of California at San Diego, in checking the mathematical accuracy of the many calculations required in the preparation of the tables in this paper. The author remains solely responsible for selection of the data included in these tables.

TABLE 1

	1967 world production	Pounds per ton of nodules [2]	Percentage of 1967 world production of associated metals that would be made available simultaneously: Manganese	Copper	Nickel	Cobalt
Primary metal to be recovered from nodules to extent of total world production in 1967: [1]						
Manganese	18,650,000 short tons ore		100	4.0	59	453
Copper	11,184,377,000 pounds	15	2,502	100.0	1,479	11,335
Nickel	1,007,943,000 pounds	20	169	8.0	100	766
Cobalt	32,890,000 pounds	5	22	.9	13	100

[1] Mainland China not included.
[2] Based on nodules containing 25 percent manganese, 1 percent nickel, 0.75 percent copper, and 0.25 percent cobalt

TABLE 2.—TONS OF NODULES AND BOTTOM AREAS TO BE HARVESTED EACH YEAR TO YIELD METALS AT THE 1967 LEVEL OF PRODUCTION FROM LAND SOURCES

Metal	World production in 1967	Pounds per ton of nodules [1]	Short tons of nodules required [2]	Area to be harvested square miles	Fraction of total deep ocean bottom area (percent) [3]
Manganese	18,650,000 short tons ore		[4] 29,800,000	1,069	0.0008
Copper	11,184,377,000 pounds	15	745,625,100	26,746	.0192
Nickel	1,007,943,000 pounds	20	50,397,150	1,808	.0013
Cobalt	32,890,000 pounds	5	6,578,000	236	.00017

[1] Based on nodules containing 25 percent manganese, 1 percent nickel, 0.75 percent copper, and 0.25 percent cobalt.
[2] Based on nodule density of 2 pounds per square foot of ocean bottom or 27,878 tons per square mile.
[3] Estimated to be 139,500,000 square miles (361×10^6 square kilometers).
[4] Increase due to lower manganese content of nodules (25 percent) as compared with 40 percent in land-based ores.

TABLE 3.—PRINCIPAL WORLD ORE RESERVES OF MANGANESE 1967

[In thousands of short tons]

Country	Manganese content of ore reserves
Australia	44,000
Brazil	46,000
China (mainland)	20,000
Gabon	96,000
India	22,500
South Africa	300,000
U.S.S.R.	200,000
Ghana	(1)
Total	728,500

[1] Not available.

Note: Equivalent tons of ore of assumed 40 percent grade—1,821,250,000 tons at 1967 rate of production from land sources (table 2). This would indicate a supply good for 98 years without any additions to reserves from new discoveries or otherwise.

Source: U.S. Bureau of Mines Commodity Statements.

TABLE 4.—PRINCIPAL WORLD ORE RESERVES OF COPPER 1967

[In millions of short tons]

Country	Copper content of ore reserves
Canada	9.9
Chile	59.3
Congo	20.0
Peru	24.6
United States	85.5
U.S.S.R.	38.5
Zambia	30.0
Others	40.0
Total	307.8

Note: At 1967 rate of production from land sources (table 2) this would indicate a supply good for 55 years without any additions to reserves from new discoveries or otherwise.

Source: U.S. Bureau of Mines Commodity Statements.

TABLE 5.—PRINCIPAL WORLD ORE RESERVES OF NICKEL 1967

[In millions of pounds]

Country	Nickel content of ore reserves
Australia	2,000
Canada	20,000
Cuba	36,000
Dominican Republic	1,600
Guatemala	2,000
Indonesia	16,000
New Caledonia	33,000
Phillipines	9,000
Puerto Rico	1,600
U.S.S.R.	20,000
United States	425
Others	7,000
Total	148,625

Note: At 1967 rate of production from land sources (table 2) this would indicate a supply good for 148 years without any additions to reserves from new discoveries or otherwise.

Source: U.S. Bureau of Mines Commodity Statements.

TABLE 6.—PRINCIPAL WORLD ORE RESERVES OF COBALT 1967

[In millions of pounds]

Country	Cobalt content of ore reserves
Canada	386
Congo	1,500
Cuba	744
New Caledonia	880
U.S.S.R. (estimate)	450
United States	56
Zambia	766
Morocco	28
Total	4,810

Note: At 1967 rate of production from land sources (table 2) this would indicate a supply good for 146 years without any additions to reserves from new discoveries or otherwise.

Source: U.S. Bureau of Mines Commodity Statements.

TABLE 7.—APPARENT YEARS SUPPLY OF METALS IN KNOWN LAND ORE RESERVES AT 1967 RATE OF PRODUCTION

Metal	Indicated years supply [2]
Manganese	98
Copper	55
Nickel	148
Cobalt	146

[1] From tables 3, 4, 5, and 6.
[2] Assuming no additions to reserves from new discoveries or otherwise.

TABLE 8.—WORLDWIDE GROSS NATIONAL PRODUCT, 1967

Area	Gross national product in U.S. dollars	
	Millions	Dollars per capita
Western Hemisphere (outside Latin America)	850,930	3,824
Western Europe	581,778	1,636
U.S.S.R. sphere	419,711	1,377
Japan	115,660	1,158
Latin America	105,783	426
South Asia	61,389	91
Near East	45,940	345
Far East (outside Japan)	43,012	147
Africa (outside South Africa)	34,240	132
Australia and New Zealand	32,304	2,213
South Africa	13,080	617
Oceania (outside Australia and New Zealand)	910	250
Total	2,304,737	

Source: Statistics and reports, Division U.S. Agency for International Development and for U.S.S.R. Sphere Monthly Bulletin of Statistics, United Nations.

TABLE 9.—VALUE OF WORLD PRODUCTION OF NODULE METALS IN 1967

Metal	Total production	Market price	Value
Manganese	18,650,000 short tons ore[1]	$25.68 per ton ore [2]	$478,932,000
Copper	11,184,377,000 pounds [3]	45 cents per pound [4]	5,032,970,000
Nickel	1,007,943,000 pounds [3]	90 cents per pound [5]	907,149,000
Cobalt	32,890,000 pounds [1]	$1.85 per pound [1]	60,846,000
Total value			6,479,897,000

[1] U.S. Bureau of Mines.
[2] Based on 40 percent Manganese content ore at 72 cents per unit or $25.68 per ton.
[3] Metallgesellschaft statistics.
[4] Estimated composite price.
[5] Average price per year.

TABLE 10.—WORLD MINE PRODUCTION OF MANGANESE ORE FROM "DEVELOPING" COUNTRIES IN 1967[1]

Country	Production short tons	Value	Total per capita	Percent of world mine production[1]
Mexico	122,000	$3,133,000	$0.07	0.6
Brazil	1,248,000	32,049,000	.37	6.7
India	1,762,594	45,263,000	.09	9.4
Ghana	580,000	14,894,000	1.84	3.1
Morocco	315,413	8,100,000	.56	1.7
Congo Republic	307,813	7,905,000	.45	1.6
Gabon	(3)	(3)	(3)	(2)
Total	4,335,820	111,344,000	----------	23.1
U.S.S.R.	7,940,000	203,899,000	----------	42.6

[1] From American Metal Market Metal Statistics.
[2] Total 18,650,000 short tons.
[3] Not available.

TABLE 11.—WORLD MINE PRODUCTION OF COPPER FROM "DEVELOPING" COUNTRIES IN 1967[1]

Country	Production metric tons	Value	Total per capita	Percent of world mine production[2]
Bolivia	6,300	$6,250,000	$1.45	0.1
Chile	660,200	654,965,000	72.77	13.0
Congo	321,500	318,950,000	18.12	6.3
Cyprus	21,500	21,330,000	35.55	.4
Finland	28,800	28,572,000	6.08	.6
India	9,200	9,127,000	.02	.2
Mexico	56,000	55,556,000	1.22	1.1
Peru	192,000	190,466,000	15.36	3.8
Philippines	86,200	85,516,000	2.46	1.7
Rhodesia	18,000	17,857,000	3.97	.4
South-West Africa	33,800	33,532,000	----------	.7
Uganda	15,000	14,881,000	1.88	.3
Zambia	663,000	657,742,000	168.65	13.1
Total	2,111,500	2,094,755,000	----------	41.7

[1] From Metallgesellschaft statistics.
[2] 5,073,200 metric tons.

TABLE 12.—WORLD MINE PRODUCTION OF COBALT FROM "DEVELOPING" COUNTRIES IN 1967[1]

Country	Production pounds	Value	Total per capita	Percent of world mine production[2]
Congo	21,424,000	$39,634,000	$2.25	65.1
Morocco	4,254,000	7,870,000	.56	12.9
Zambia	3,608,000	6,675,000	1.71	11.0
Total	29,286,000	54,179,000	----------	89.0

[1] From American Bureau of Metal Statistics Year Book.
[2] 32,890,000 pounds.

TABLE 13.—WORLD MINE PRODUCTION OF NICKEL FROM "DEVELOPING" COUNTRIES IN 1967[1]

Country	Production metric tons	Value	Total per capita	Percent of world mine production[2]
Finland	3,400	$6,746,000	$1.44	0.7
Greece	2,500	4,960,000	.57	.6
Africa (other than Republic of South Africa)	1,200	2,381,000	----------	.3
Cuba	23,600	46,826,000	6.89	5.2
New Caledonia	72,000	142,858,000	2,197.82	15.8
Total	102,700	203,771,000	----------	22.6
Canada	224,000	444,447,000	----------	49.0

[1] From Metallgesellschaft statistics.
[2] 457,200 metric tons.

Mr. FRASER. Thank you very much, Mr. Ely, for a very fine statement.

Professor Knight, you may proceed.

STATEMENT OF H. GARY KNIGHT, CAMPANILE CHARITIES PROFESSOR OF MARINE RESOURCES LAW, LOUISIANA STATE UNIVERSITY LAW CENTER, BATON ROUGE, LA.

Mr. KNIGHT. With your consent I would like to have the statement entered into the record and I will then summarize it very briefly for you.

Mr. FRASER. Without objection, the entire statement will go into the record.

(The written statement follows:)

STATEMENT ON U.S. OCEAN POLICY AND THE INTERNATIONAL LAW OF THE SEA NEGOTIATIONS, BEFORE THE SUBCOMMITTEE ON INTERNATIONAL ORGANIZATIONS AND MOVEMENTS OF THE COMMITTEE ON FOREIGN AFFAIRS, U.S. HOUSE OF REPRESENTATIVES, TUESDAY, APRIL 11, 1972

(By H. Gary Knight, Campanile Charities Professor of Marine Resources Law, Louisiana State University Law Center)

I. INTRODUCTION

My name is H. Gary Knight. I am an Associate Professor of Law and Marine Sciences at the Louisiana State University Law Center. I also currently hold the University's Campanile Charities Professorship of Marine Resources Law, and receive additional research support from the University's Office of Sea Grant Development (Office of Sea Grant Programs. National Oceanic and Atmospheric Administration, Department of Commerce). I am a member of the Advisory Committee on the Law of the Sea which assists Hon. John R. Stevenson, Legal Adviser to the Department of State, in his dual capacity as head of the Inter-Agency Law of the Sea Task Force and as chairman of the United States delegation to the United Nations Seabed Committee.

I have no financial interest or any clients with financial interests in the development of ocean resources.

As this Subcommittee is well aware from its previous investigations[1] and continuing interest in the subject of ocean resources and the policies for their conservation and exploitation, a good deal of activity at both the national and international level has been place since the Subcommittee's report of October, 1968. I shall not attempt here to summarize those activities, since the Subcommittee will derive that information thought the testimony of United States Government representatives. Rather, it is my purpose in this statement to (1) define what I feel to be the most important long range objectives of United States oceans policy, (2) comment specifically upon some aspects of the United States proposals of August, 1970, and August, 1971, relating to military, petroleum, hard minerals interests, which I believe weaken the chances for achieving this objective, and (3) to recommend to the Subcommittee some courses of action which I believe would assist in securing this objective.

Before turning to criticism, however, I would like to observe that in general the policies embodied in the proposals submitted by the United States delegation to the United Nations Seabed Committee are good and desirable, par-

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[1] "Jurisdiction over Ocean Resources," *Interim Report of the Subcommittee on International Organizations and Movements of the House Committee on Foreign Affairs* (90th Cong., 1st Sess., November 3, 1967); "Interim Report on the United Nations and the Issue of Deep Ocean Resources together with Hearings," *Report by the Subcommittee on International Organizations and Movements of the House Committee on Foreign Affairs* (90th Cong., 1st Sess., December 7, 1967); "The Oceans: A Challenging New Frontier," *Report by the Subcommittee on International Organizations and Movements of the House Committee on Foreign Affairs* (90th Cong., 2d Sess., October 9, 1968). See also "Exploiting the Resources of the Seabed," *Study prepared for the Subcommittee on National Security Policy and Scientific Developments of the House Committee on Foreign Affairs* (July, 1971).

ticularly the "Draft United Nations Convention on the International Seabed Area" ("Draft Convention"), which I have analyzed in some detail elsewhere.[2] The members of the Inter-Agency Law of the Sea Task Force, and especially its chairman, John Stevenson, are highly knowledgeable individuals who are deeply concerned with both the National interest in the oceans and the broader international community perspective. If I were to be forced into a "go" or "no-go" decision on oceans policy as it is presently being developed by the Executive branch, I would have to say "go." Fortunately, no such decision is required, and both Congress and the private sector can in good faith suggest modifications in or additions to our oceans policy without suggesting that what has already been done is without merit. It is in this spirit that I call to the attention of the Subcommittee what I believe to be some defects in current proposals and attitudes of special interest groups.

II. LONG-RANGE OBJECTIVES OF U.S. OCEANS POLICY

There are a number of explicit objectives in our National oceans policy as it is presently being developed. Among the more important are: (1) the preservation of national security, (2) the development of food and energy resources from the ocean, (3) the granting of assistance to developing nations, (4) the protection of the marine environment, and (5) the establishment of an international regime and machinery to govern activities undertaken in the ocean beyond the limits of national jurisdiction. The necessity for the first four can hardly be argued—ocean resource development systems must not be permitted to unreasonably imperil national security; there exists an urgent need for additional food and energy resources; economic aid to less developed countries is a long standing National policy; and avoiding irreparable damage to the environment has strong National support. Less agreement can be reached on the fifth object.

It is my personal view that one of the most beneficial long term goals of current ocean policy initiatives might well be the establishment of a workable system of international cooperation in the use of the oceans which could ultimately be the basis for a new world political organization or for reorganization of the political agencies of the United Nations.

As the Subcommittee members realize, the task of developing a system of international political cooperation or a system of resource/revenue sharing is made extremely difficult by the existence of vested interests in the existing political or economic order. Nations in the main are reluctant to relinquish aspects of their political or economic sovereignty which would be necessary for effective international government. Nations are equally reluctant to part with resources or revenues in which they have a present vested interest—fear of the "great give-away" dictates that meaningful international political and economic cooperation is problematical.

The beauty of the ocean environment in this respect is that there are few if any vested interests in the area or its resources at present. Territorial sovereignty can probably be limited to twelve miles from the coast; vested interests in non-living resources of the seabed and subsoil do not extend beyond the 200 meter isobath at present; and beyond relatively narrow exclusive fishing zones, the living resources of the sea are the property of no one until reduced to possessions. Thus, rather than giving up anything they already possess, nations would be able to develop cooperatively a new regime to govern activities taking place in the ocean without running the risk of domestic repercussions from dealing away vested economic or political rights.

Unfortunately, in my view, there are forces at work—from the private sector and from within government—to lessen the possibility of reaching agreement on a meaningful international regime for the oceans. It is to these forces that I shall address the bulk of my comments.

III. ASPECTS OF CURRENT U.S. OCEANS POLICY WHICH MAY BE DETRIMENTAL TO THE ACHIEVEMENT OF INTERNATIONAL OCEANS ORGANIZATION

The United States oceans proposals of August, 1970, and August, 1971, are essentially compromises among the several users of the marine environment—military, petroleum, hard minerals, fisheries, scientific research, transportation,

[2] Knight, "The Draft United Nations Convention on the International Seabed Area: Background, Description and Some Preliminary Thoughts," 8 San Diego Law Review 459 (1971).

and environmental protection, among others. Accommodation of the desires of some of these interests has, in my opinion, restricted the possibility of achieving a meaningful international organization to govern the use of the ocean. Additionally, many less developed countries are contributing to this end by supporting the concept of "economic resource zone" extending 200 miles from the coast in which the coastal state would have exclusive or preferential rights to exploit living and non-living resources. If, however, the United States and other technologically advanced nations were to take bold steps in the direction of support for an international regime and machinery having jurisdiction over resource rich areas of the continental margins, this adverse trend might be attenuated.

I shall limit my criticisms to three interest groups: military, petroleum, and hard minerals.

A. Military

As the Subcommittee is aware from earlier testimony, the interests of the Department of Defense ("DOD") in the law of the sea lie in two main areas: (1) naval mobility, which can be subdivided between the needs of the nuclear armed Polaris fleet and more traditional naval operations, and (2) the right to implant anti-submarine warfare ("ASW") tracking and detection devices on the seabed. These interests can be briefly summarized as follows:

1. *The Polaris Nuclear Strike Force.*—The Polaris system is the linchpin of our second strike nuclear capability which is in turn the key element in our current nuclear deterrent philosophy. The objective is to render undetectable, and therefore undestroyable, the submerged Polaris fleet. In order to maximize undetectability the Polaris fleet requires maximum possible mobility. This in turn dictates the narrowest possible belt of maritime territorial sovereignty. It is clear, however, that the worldwide trend is away from the traditional three mile breadth for the territorial sea and toward a 12 mile breadth, or more. As an inhibiting factor on general mobility, the expansion from three to twelve miles is relatively insignificant. The importance of the expansion is that a substantial number of straits which now contain areas of high seas by virtue of a three mile limit would become entirely territorial waters. Under the provisions of the Convention on the Territorial Sea and the Contiguous Zone, submarines are required to navigate on the surface and show their flag when navigating within territorial waters. This means that whereas Polaris submarines may now legally pass through straits such as Gilbraltar in a submerged state, expansion of the territorial sea to twelve miles would, without other change in the existing law of passage, require them to surface and show their flag when making the same passage. Accordingly, the Department of Defense sees as necessary the implementations of a system of "free" passage through international straits, including the right of overflight and submerged passage (for purposes of transit only), and without control or conditions imposed by the coastal state.

2. *Intelligence Operations and Traditional Naval Maneuvers.*—Obviously, intelligence gathering vessels would prefer the narrowest possible territorial sea, for there is a marked increase in the resolution of electronically and visually gathered data as one moves closer to the source being investigated (of course, narrow territorial sea limits also make more vulnerable to "enemy" surveillance one's own shore based security installations). Further, traditional uses of naval power, including "gunboat diplomacy" maneuvers, also dictate the narrowest possible territorial sea. Finally, any restrictions which might be placed on surface warships under a subjective interpretation by the coastal state of the standard of "innocent" passage under present law (which would be applicable to an increased number of straits if the territorial sea were expanded from three to twelve miles) might hamper traditional naval mobility. Thus, on the basis of these interests as well as the Polaris situation, the military establishment is interested in a relatively narrow territorial sea and a system of "free" passage through international straits.

3. *ASW Tracking and Detection Devices.*—A concomitant of the Polaris Fleet's operations is the necessity for tracking and detecting their counterparts from the Soviet Union or other potentially hostile nations. The desired objective here, of course, is that the seabed and subsoil beyond a reasonably narrow zone be open for the implantation of ASW tracking and detection devices. Although recognizing the obvious need for coastal state or international community jurisdiction over the exploitation of the resources of the seabed and the subsoil, the regime desired by DOD would leave open to use by all states "other" seabed activities, presumably including the right to deploy such ASW devices.

Examining the 1970–71 United States law of the sea proposals, it is not surprising to find that *all* of the needs of the military establishment have been met to the fullest possible degree. The requirements of a relatively narrow territorial sea and innocent passage through straits are met through the proposed Articles I and II submitted to the United Nations Seabed Committee at its August, 1971 meeting. Articles I and II provide in essence for a twelve mile territorial sea and a system of free passage through straits constituting "the same freedom of navigation and overflight, for the purpose of transit through and over [international] straits, as [is permitted] on the high seas."

With respect to the military interests in maintaining freedom to implant ASW tracking and detection devices on the seabed, one finds satisfaction of this need in the Draft Convention. That proposal would limit the exercise of *exclusive* coastal state jurisdiction for other than mineral exploitation purposes to the 12 mile limit, since under both the Convention on the Continental Shelf (which presumably would remain applicable to the 200 meter isobath) and the Draft Convention (including the Internatioanl Trusteeship Area), exclusivity is permitted *only* with respect to the exploitation of seabed resources and would not, therefore, act as a bar to "inclusive" other uses. The basis for this interpretation is Article 3 of the Draft Convention which provides that "[t]he International Seabed Area shall be open to use by all States, without discrimination, except as otherwise provided in this Convention." The Draft Convention provides "otherwise" only with respect to exploration and exploitation of certain natural resources, presumably leaving all other uses to be covered by the "open to use by all States" proviso of Article 3.

4. *Analysis.*—With respect to the desire for an "international" regime in order to avoid extensions of national jurisdiction which might (a) prejudice the ASW tracking and detection system, or (b) limit freedom of navigation beyond 12 miles, I have no essential quarrel, except to note that (a) it consists in doing the right thing for the wrong reason, and (b) it is based on the validity of the concept of "creeping jurisdiction" for which I find little evidentiary support. I do dispute, however, the necessity for the substance and strategy involved in the straits passage proposal (Article II).

In his August 3, 1971, speech Mr. Stevenson stated that the United States Government "would be unable to conceive of a successful Law of the Sea Conference that did not accommodate the objectives of these Articles [I and II]." Such a statement indicates a present intention on the part of the United States to treat the Article II objectives as non-negotiable. Non-negotiable status ought to be reserved for National needs of the highest priority, and it seems to be the proposal for free submerged passage which is regarded as so critically important by this Nation's negotiating team. A brief analysis of the necessity for submerged passage through international straits is therefore in order.[3]

If the Soviet Union now possesses a sophisticated ASW tracking and detection system of its own which is operative in key straits, then the object of non-detection will *not* be secured by free submerged passage through such straits. It follows that there is no necessity for free submerged passage unless there are reasons other than that mentioned to justify it.

If the Soviet Union does *not* have such a detection system, the probability of their developing one in the near future seems relatively high. Even assuming that the law of the sea conference is held in 1973, the earliest possible time by which any treaty providing for free passage through straits could enter into force would seem to be 1978–1980. With regard to states which do not become parties to such a convention, substantial additional time will be necessary for the concept to ripen into a principle of customary international law (indeed, this might never come about at all because of the existence of a competing practice maintained by a significant number of states who might continue to recognize the concept of "innocent" passage). Given these time lags, it seems unlikely that the Soviet Union would not possess a sophisticated ASW detection system by the time such an agreement could enter into force. If this assumption is correct then the same conclusion reached above follows.

Another argument against the utility of free submerged passage through straits is the probability that an Underwater Launching Missile System ("ULMS") will

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[3] I am assuming in this analysis that both non-detection and non-destruction of nuclear armed Polaris class submarines are key elements in the preservation of our second strike nuclear capability which is, in turn, the linchpin of the current deterrent to nuclear conflict. I am also assuming that detection is a *sine qua non* to destruction. Finally, I assume that our strategy is based essentially on confrontation with the Soviet Union.

soon be operational for the United States. ULMS greatly reduces reliance on mobility since the launch position does not need to be as near to the shore as required by the present Polaris class submarines. Again, the ULMS system will probably be operative prior to the time that any such treaty provision could enter into force and if this is the case, insistence upon submerged passage through straits would seem to be of little utility.

Even if the above arguments were not compelling there is a further consideration, namely that detection of passage through straits will not in itself destroy the effectiveness of the Polaris second strike capability, for in order to render it ineffective it is also necessary to have the capacity to destroy the submarines before they can launch a second strike. Accordingly, only knowledge of the location of the submarine at the time of necessity to destroy it is critical, and not merely its general location which might be determined by observing its passage through a strait. Further, if our Polaris submarines are equipped with inertial guidance systems so that the launch of a second strike can be effected at any instant, location for purposes of destruction is virtually impossible. However, even if such systems are not in operation or are ineffective, the preordained launch positions are a matter of national security and the mere detection of a submarine passing through a strait would not release such information. Rather, it would require a breach of security which is totally unrelated to the question of free submerged passage through straits.

Finally, and conclusively it seems to me, is the fact that the Soviet Union is apparently as much in favor of the Article II concept as is the United States. It is doubtful whether any significant military advantage is being secure by the United States through Article II since the military planners in the Soviet Union obviously would not support a proposal which would, if adopted, place their nation at a marked disadvantage.

Based on these arguments I have difficulty concluding that there is a necessity to have the right of free submerged passage through straits and therefore fail to see the justification for making the matter a non-negotiable issue.

The potential damage is twofold. First, if the community of nations rejects this non-negotiable demand, then theoretically the Conference cannot succeed, and all chances for international cooperation in the oceans will be lost. Second, by assigning non-negotiable status to the straits position, great concessions are probably going to have to be made in other areas—perhaps with respect to fisheries, scientific research, or even petroleum and hard minerals—which could impair the effectiveness of those operations. Either result is undesirable.

B. Petroleum

As the Subcommittee has learned from earlier testimony, the domestic petroleum industry desires extension of national jurisdiction to the edge of the continental margin for purposes of exploiting the non-living resources of the seabed and subsoil. The industry asserts that to renounce national jurisdiction beyond the 200 meter isobath is to "give away" national resources, and it argues that it could not operate successfully under the regime proposed in the Draft Convention for the International Trusteeship Area because the international authority would have unspecified residual powers. I disagree with these assertions.

1. *The "Draft Convention" Poses No "Give-Away" Threat.*—I contend that there are no present vested rights in non-living resources of the seabed and subsoil beyond the 200 meter isobath which would be subject to "renunciation" by the Draft Convention. The Convention on the Continental Shelf, to which the United States is a party, defines the portion of seabed and subsoil in which contracting states have exclusive natural resource exploitation rights as extending to the 200 meter isobath "or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of said areas." Since no commercial production of non-living resources exists at present beyond the 200 meter isobath, and since the mere granting of exploration permits alone could not conceivably meet the "exploitability" criterion of the Convention, no interest in seabed resources beyond the 200 meter isobath has as yet vested in any state party to the Convention, including the United States. At best such interest is an inchoate right, in the nature of an inheritance, to vest on occurrence of a condition. Thus the United States, in agreeing to the regime proposed in the Draft Convention, would simply be exchanging an inchoate right for a definite, present interest and could in no sense be said to be "giving away" a *vested* National resource.

The decision of the International Court of Justice in the North Sea Continental Shelf Cases is often cited as authority for the proposition that a coastal state's interest in seabed resources extends *at present* to the edge of the continental margin. The court there stated:

> [T]he most fundamental of all the rules of law relating to the continental shelf . . . [is] that the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land territory into and under the sea exists ipso facto and ab initio by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources.

The argument based on that decision is untenable for two reasons: (1) the cited statement is *dicta* since the issue before the Court was not the seaward extent of the continental shelf but rather the determination of princples applicable to the delimitation of *lateral* shelf boundaries between adjacent states; and (2) the proposition is stated to be a rule of customary international law which may be modified by international agreement, an event which has in fact happened in the form of the Convention on the Continental Shelf.

The I.C.J. decision being therefore inapplicable to the United States in this situation, one must conclude that this Nation, as a party to the Convention on the Continental Shelf has no present vested national interest in the natural resources of the seabed and subsoil beyond the 200 meter isobath. Further, the inchoate rights which the United States now possesses beyond the 200 meter isobath would be exchanged, under the Draft Convention provisions, for exclusive administrative rights over exploitation of seabed resources out to the edge of the continental margin, a *net gain* in jurisdictional terms.

2. *The Regime of the "International Trusteeship Area" is Not Incompatible with Petroleum Industry Operations.*—Although the Draft Convention calls for a renunciation of national jurisdiction beyond the 200 meter isobath, the document gives back to the coastal state special jurisdictional rights with respect to the exploration for and exploitation of non-living resources of the seabed and subsoil in the area between 200 meters and the edge of the continental margin. The rights thus obtained by the coastal state permit it to determine if, where, when, how, and by whom the resources shall be developed. This wide discretionary power is spelled out in detail in Appendix C to the Draft Convention. Residual rights would, however, be retained by the international authority. These residual powers would include the power to establish rules to avoid conflicts of use, to protect the ocean from pollution, to assure the integrity of the investment necessary for exploitation, and to provide for peaceful and compulsory settlement of disputes, as well as other powers not exclusively delegated to the coastal state in its trusteeship capacity.

Clearly, the petroleum industry has sufficient guaranty under this system of administration by the coastal state to ensure security of investment for its operations. The fear of abuse of residual powers by the international agency is unwarranted in my view. The industry now operates on the United States continental shelf under regulations concerning erection of offshore structures and protection of the marine environment which are equally subject to uncertainty and abuse, yet this has not affected the willingness of petroleum companies to continue offshore exploration and development. To give but one example, operators under the Outer Continental Shelf Lands Act now erect structures on the continental shelf off the coast of the United States under permits which are *revocable at the will of the Secretary of the Army.* It is difficult to think of a more uncertain and unknown residual power than that condition in all permits for structures in navigable waters of the United States issued by the U.S. Army Corps of Engineers.

Accordingly, it seems to me that the fear evidenced is not of the uncertainty attending reservation of residual powers, but the fact that they would be internationally administered. This, however, is part of the price we must be prepared to pay if we are to secure the objective described earlier.

The damage to the potential for international control of ocean uses from adoption of the petroleum industry viewpoint hardly needs articulation—if national jurisdiction were extended to the edge of the continental margin, there would be no resources of any near term economic significance under international jurisdiction. Without a meaningful economic constituency, such an international relations.

C. Hard Minerals

The only point of disagreement which I have with the hard mineral industry position on current law of the sea negotiations is one of timing. As the Subcommittee is aware, there has been introduced in both houses of Congress the "Deep Seabed Hard Mineral Resources Act" (S. 2801) which, as has been explained earlier, would establish a system of "flag nation" jurisdiction over hard mineral mining activities on the seabed beyond the limits of national jurisdiction. The Act envisions parallel legislation in other technologically advanced states.

This Nation is currently involved in complex negotiations on the law of the sea leading to the Third United Nations Conference on the Law of the Sea to be held next year. It is from this Conference that an international regime for the oceans, if one is to exist, will evolve. If, however, the "Deep Seabed Hard Mineral Resources Act" becomes the law of this Nation, then an international regime for the area beyond the limits of national jurisdiction will be precluded, for the "flag nation" approach will have been imposed on the area by those with the technology to mine deep seabed minerals.

It seems to me that we ought to give the current international negotiations a chance to fail before we opt for alternative systems. If, indeed, the negotiations do fail to establish an international regime and machinery, then S. 2801 might well be the most appropriate vehicle for development of deep seabed hard minerals. But pending such a failure, enactment of S. 2801 can only precipitate expansion of claims to national jurisdiction in the ocean, for the developing nations are likely to view this (in spite of the revenue sharing provision in the Act) as a "grab" by technologically advanced nations and respond in kind with 200 mile resource zone claims, thus sealing off once and for all the possibility of international control over ocean uses.

IV. RECOMMENDATIONS

Based on the above comments, I recommend to this Subcommittee the following courses of action, all designed to achieve the objective of meaningful international cooperation in the oceans:

1. The Department of Defense should be called upon, in executive session if necessary, to explain the basis for Article II in terms of national security and to explain the basis for making Article II a non-negotiable element of United States oceans policy. If in fact either the objectives of Article II are deemed unnecessary, or, if necessary, not so vital as to deserve non-negotiable status, our oceans policy should be appropriately amended.

2. The United States should stand firm on the narrowest possible limit of exclusive national jurisdiction with respect to non-living resources of the seabed and subsoil and should strive to strengthen, not weaken, the role of the international regime and machinery in the area beyond the 200 meter isobath.

3. Congress should not *at this time* pass the "Deep Seabed Hard Mineral Resources Act," but should defer action thereon until after the conclusion of the Third United Nations Conference on the Law of the Sea.

4. The Inter-Agency Law of the Sea Task Force should produce proposals as equally foresighted as the Draft Convention in the fields of international fisheries management, protection of the marine environment, and scientific research in the oceans.

Mr. KNIGHT. As I note on page 1 of my prepared statement, I have no financial interests, or any clients with financial interests, in the development of ocean resources.

As you will unquestionably discern as my statement goes on, the views expressed by Mr. Ely and the views that I will express are representative of somewhat polarized positions.

On page 3 I have identified what I believe to be a number, not necessarily exclusive, of explicit objectives of our national oceans policy, including such items as (1) the preservation of national security, (2) the development of food and energy resources from the ocean, (3) the granting of assistance to developing nations, and (4) the protection of the marine environment. My argument is that (5)—the establishment of an international regime and machinery to govern activities under-

taken in the ocean beyond the limits of national jurisdiction—is, or ought to be, by far the most important long-term objective of this Nation because long after resource development ceases to be an issue, either because we economically exhaust those resources or because we adopt a sane consumption policy, the issue of foreign relations is going to remain with us.

At pages 3 and 4 I note that the ocean environment provides a unique opportunity in this respect since there is at present a lack of vested economic and political interest in the area. Nations, as you well know, are loathe to give up pieces of their economic or political interests in order to cooperate in international organization, and the oceans therefore offer a unique opportunity in this regard.

Unfortunately, I think there are several forces at work which endanger this possibility. I have addressed four in my statement.

The first concerns the position of the Department of Defense. As you know from the briefings yesterday, and for all the reasons I have set out at pages 5 through 8 of my statement, the Department of Defense is willing to concede a 12-mile territorial sea in return for free transit through international straits.

I suggest that there is a lack of necessity for that objective, much less a need for making it a nonnegotiable demand as we have. The potential damage is that if the community of nations rejects this nonnegotiable demand then the Law of the Sea Conference may well fail and we will have no international system in the oceans at all.

Further, by assigning nonnegotiable status to this request for free passage through straits, great concessions are probably going to have to be made in other areas; for instance, in resource development systems. I do not think that this is particularly desirable. I am supported in that position by the staff report recently prepared for Senator Henry Jackson which states:

> We recognize that the U.S. free transit proposal was admittedly designed by the Defense Department to enhance U.S. military security. We are also aware of the committee's unfaltering support of the necessity of U.S. naval mobility. We call this fact to the attention of the committee because we believe that the U.S. free transit proposal may be unattainable and because we fear that the Defense Department might urge the Administration to abandon its deep seabed mining objectives and support the creation of an international seabed mining monopoly controlled by less developed nations as a trade-off for the votes of such less developed nations in favor of the Defense Department-sponsored free transit proposal.
>
> To sacrifice U.S. mineral interests in mining the deep seabed for a perceived military objective is at least debatable; but to sacrifice U.S. mineral objectives in mining the deep seabed for what may be an unattainable military objective is folly, we feel.

The second interest which is thwarting possibilities for international cooperation in the oceans is the petroleum industry, and my comments on this industry's positions are contained at pages 11 to 14 of my statement. As Mr. Ely has made clear, the petroleum industry seeks extension of national jurisdiction to the edge of the continental margin. Obviously, if this position succeeds there will be no meaningful resources of economic value left for management by an international agency, and thus the objective which I feel is so important will be lost.

I have explained at some length in my statement why I feel that the industry position on two issues—one, that the Draft Convention poses a threat to give away national resources; and two, that the re-

gime proposed for the trusteeship area in the Draft Convention is incompatible with petroleum industry needs for rational operation—is erroneous. I would like to expand for just a second on the first.

Lawyers and international lawyers differ on the question of present rights which coastal states have off their coast. It is my contention that there are at present no vested rights beyond the 200-meter isobath, and the legal reasoning I give is contained in my statement at pages 11 and 12.

The third factor is the hard minerals industry. I do not disagree with the Deep Seabed Mineral Resources Act within its four corners. What I disagree with is the timing with which it is being presented. If that act were adopted, we would have a system of "flag nation" jurisdiction over hard mineral activities on the seabed beyond the limits of national jurisdiction. The effect would be to foreclose any meaningful international machinery in the area. I simply think that Congress should wait until the current law of the sea negotiations have failed or have reached an impasse before opting for such a nationalistic approach.

The fourth interest group which I think is thwarting hopes for an international regime for the ocean is the fishing industry and the Government agencies with which that industry is associated. The fisheries industry, through article III to which you were introduced yesterady, and as expanded and made even more nationalistic in Ambassador McKernan's speech before the United Nations Seabed Committee on March 29, 1972, would establish a regime in which the coastal state would be predominant.

Quoting from Ambassador McKernan:

> Within the framework of the species approach, and in respect to two types of fish stocks, coastal and anadromous, we are prepared to consider a greater role for coastal States.

He also said:

> We are ready to consider whether responsibility for conservation and management of coastal and anadromous species could rest primarily with the coastal State, subject to agreed international standards and review.

There is more language in his statement to the same effect. I think by supporting that position we are also tending to so guard national interests that was seriously limit the possibilities international cooperation in the oceans.

I have concluded my statement at pages 15 and 16 with four recommendations.

First, the Department of Defense should be called upon, in Executive session if necessary, to explain the basis for article II in terms of national security and to explain the basis for making article II nonnegotiable element of United States oceans policy. If in fact either the objectives of article II are deemed unnecessary, or, if necessary, not so vital as to deserve nonnegotiable status, our oceans policy should be appropriately amended.

Second, the United States should stand firm on the narrowest possible limit of exclusive national jurisdiction with respect to nonliving resources of the seabed and subsoil and should strive to strengthen, not weaken, the role of the international regime and machinery in the area beyond the 200 meter isobath.

Third, Congress should not at this time pass the "Deep Seabed Hard Mineral Resources Act," but should defer action thereon until after the conclusion of the Third United Nations Conference on the Law of the Sea.

Fourth, the Inter-Agency Law of the Sea Task Force should produce proposals as equally foresighted as the Draft Convention in the fields of international fisheries management, protection of the marine environments, and scientific research in the oceans, emphasizing with respect to each the role of international jurisdiction rather than extensions of coastal State jurisdiction.

Mr. FRASER. Thank you very much, Professor Knight.

Let me direct a question to all of you although it may have already been answered by Professor Knight.

What would your view as to the desirability of a law such as the one pending in Congress to establish some kind of interim arrangement to authorize the importation of the deep sea resources?

Mr. ELY. I think Mr. Laylin should have the privilege first, he is more directly concerned.

Mr. LAYLIN. I am definitely in favor of it. I have participated with the American Mining Congress so I am definitely familiar with it. Only one secretary actually ever wrote something because everybody has contributed to it. I think it is essential in order to get action in the Seabed Committee. I respect very much my colleague Professor Knight's opinions on these things but I asked him before the meeting if he had ever heard of anything called anticipatory breach in the law of contracts, and if you look at the speed with which this Seabed Committee is progressing we will be a generation before his condition is fulfilled that the convention has demonstrated its failure. It is demonstrating itself in advance.

Ambassador Paul Engo of Cameroon who is the chairman of the subcommittee on the subject of which we are talking said at the end of this last March meeting that by comparison the drafting of the United Nations charter by 51 countries may seem a simple exercise. You have to think in a very long term—20 to 30 years—to share Jack Stevenson's encouragement that there was progress at this last meeting. They did agree on having a subcommittee or drafting committee or working committee to put into treaty language the principles that have been set forth in the resolution of the General Assembly. That group met and these countries that I referred to that don't want competition from the deep sea voted against us doing any work until the beginning of the July meeting.

Now while we are waiting to prove what is in advance something that I am convinced will never come about unless we move ahead, other countries are going to go ahead. We are not going to stop the Japanese, we are not going to stop the Russians. According to a statement by Dr. Vincent E. McKelvey, Chief Geologist, United States Geologic Survey, there are 2 dozen companies from the United States, Canada, Japan, France, West Germany and Australia engaged in one form or another of experimental exploitation.

Now we have all agreed to renounce any claims to sovereignty of the deep seabed but that does not mean that the Japanese or the Russians or somebody else may not say, "OK, we have mined this particular area now for 10 years and we have acquired a priority of rights. Sure,

we are not sovereign but we have acquired a priority of rights and you stay out of it." So I think that the United States would be very ill-advised to follow my good friend's advice.

Mr. FRASER. What is the requirement for a law? As you interpret the law, in the deep ocean area it would appear (other than whatever weight you give the United Nations General Assembly resolution) that there is nothing that would prevent a private entrepreneur from going out and putting his rig down and proceeding to take out whatever he can get. First, am I right about that?

Mr. LAYLIN. Yes, but there is nothing to prevent deep sea ventures as represented by Mr. Greenwald behind me from coming into one of the places where one of my clients is mining.

Mr. FRASER. But how can the United States prevent that unilaterally?

Mr. LAYLIN. The United States has jurisdiction over Mr. Greenwald and over me.

Mr. FRASER. You mean as between U.S. competing nationals there could be some allocation, but is that the only reason?

Mr. LAYLIN. Mr. Congressman, there is nothing unilateral in this proposed legislation in a territorial sense, none whatsoever. This flagship approach is really a misnomer. It says that you people subject to the jurisdiction of the United States may not impinge upon the licensed areas of other Americans, period.

Mr. FRASER. I meant that I presume we cannot control the actions of a British firm or a Japanese firm. That is what I meant by unilateral U.S. action.

Mr. LAYLIN. The Russians can move.

Mr. FRASER. What you are saying, then, is that the basic reason why you believe there should be legislation is to regulate competing claims among American nationals.

Mr. LAYLIN. A then B, we hope to set a good example for other countries because this draft resolution requires orderly development and respect to these five points that Mr. Ely spoke of. We would hope that the English, the West Germans, the Japanese, probably the Russians would pass comparable legislation and then we would provide in our legislation this draft does so provide that if one of these countries puts restraints on its own citizens or subjects then we will prevent Americans from impinging on their licenses if they will prevent Germans or Englishmen or Japanese from impinging on American licenses, but there is no territorial assertion in the whole bill.

Mr. FRASER. Sort of a massive homesteading operation; everybody will be moving to stake out claims under national authority.

Mr. LAYLIN. No, it is like a family making the kids behave—I will keep my child from punching the nose of your child if you will keep your child from punching the nose of mine.

Mr. FRASER. Professor Knight?

Mr. KNIGHT. Once you have established this system of reciprocal legislation you have necessarily created one of the international regimes that has been debated for the last 5 or 6 years namely, the flag-nation system. This says that the law applicable to the exploitation of seabed and subsoil resources will be that of the flag which the vessel or other structure flies. Now once you opt for that system and it is adopted by other major technological powers, you have accepted

the flag-nation system, and this precludes a meaningful international organization such as proposed in the draft convention. I don't think the hard mineral people would turn loose of such a law once they had it.

Mr. FRASER. I can understand that if this is the way of allocating claims and that is all that happens, then you are right, and that is a form of control which, as you say, is one of the options now open. Inherently why would the establishment of that, however, preclude or make less likely the ultimate development of the kind of international regime that you would like?

Mr. KNIGHT. Simply the existence of a vested interest. Once an industrial interest gets a law on the books, such as the depletion allowance of the petroleum industry, it is very difficult to get it off. I don't think the hard minerals industry would ever turn loose of S. 2801 if they could avoid it.

Mr. FRASER. Having acquired at least a partially defensible right—that is, defensible at least to other nations in the sense they don't want it in—to give that up in favor of an international regime's control.

Mr. KNIGHT. Precisely. That is what I argue in my statement. Right now we have this tremendous opportunity for international cooperation but if you wait 10 years, there will not be anything left to carve up because the response of the less-developed countries will be to characterize S. 2801 as a "grab" by the technological powers who can mine deep seabed minerals. The minute that occurs every less-developed coastal state is going to go to a 200-mile exclusive resource zone and that is the end of the ocean insofar as international cooperation is concerned.

Mr. FRASER. We will recess temporarily for a floor vote.

Mr. LAYLIN. Ethiopia can pass this legislation, it is not a flag thing at all.

Mr. FRASER. Perhaps we can come back to that question.

(Whereupon, the subcommittee recessed.)

Mr. FASCELL (presiding). Let's get back on the record, gentlemen. Do I gather there is a difference of opinion here somewhere?

Mr. KNIGHT. A slight difference of opinion; yes.

Mr. LAYLIN. Not in objective I would say; I think it is in tactics.

Mr. FASCELL. Mr. Knight, what is the thrust of your posture?

Mr. KNIGHT. It is simply a question of values. I place a higher value on the potential of the oceans as a forum in viable international organization than I place on its function as a repository of natural resources. In other words, I am willing to prejudice resource development for the potential of international cooperation.

Mr. FASCELL. You mean as a separate international regime or institution under the United Nations—outside the United Nations?

Mr. KNIGHT. I think completely unconnected with the United Nations except for the fact that the United Nations called the conference from which the treaty would evolve. I think clearly if it is to exist it cannot have the same type of decisionmaking structure as the United Nations—this will not work. It could be the model either for a meaningful international organization or for a revision of the United Nations.

Mr. FASCELL. Why do you think it would be more meaningful, because of the resources involved to make it?

Mr. KNIGHT. Yes, sir. It deals with a technical subject and it is easier for nations to agree on technical matters than on political matters. With the experience of the United Nations system in the General Assembly and Security Council that we have had, it would be wise to avoid those errors and place responsibility for decisionmaking in an organ fairly divided between advanced technology nations, developing countries, landlocked countries, et cetera.

Mr. FASCELL. You get into the specifics of extending the authority of the international regime in terms of licensing, revenue sharing, et cetera.

Mr. KNIGHT. No. Basically I am satisfied in that regard with the draft convention proposed by the United States to the U.N. Seabed Committee in the fall of 1970.

Mr. FASCELL. It deals with licensing, does it, sharing and the pooling of revenues?

Mr. KNIGHT. Yes, sir.

Mr. FASCELL. And an allocation formula?

Mr. KNIGHT. For distribution of revenues?

Mr. FASCELL. Yes.

Mr. KNIGHT. It specifies that these revenues are to be used for the benefit of all mankind and further that they are to be used specifically with the interests of developing countries in mind. I believe from my discussions with members of the executive branch that the objective is to channel these funds through existing international development agencies and not as a direct subsidy to developing countries.

Mr. FASCELL. In other words, you mean like bolstering UNDP, for example?

Mr. KNIGHT. Yes, or channeling new funds into the World Bank or the Inter-American Development Bank.

Mr. DELLUMS. Mr. Chairman.

Mr. FASCELL. Mr. Dellums.

Mr. DELLUMS. I would like to ask Mr. Knight or the entire panel to respond to this statement. As I see the issue for the whole world the most important benefit which could come from a law of the seas and seabed agreement would be for the first time a major self-generating source of funds for the United Nations or some international organization to use for developing assistance through royalties to the international organization for exploitation of such seabed resources, much more money than ever could become available to the developing countries and without the political deficiencies of bilateral aid. I was wondering if all three of you would respond to that.

Mr. LAYLIN. Sir, I subscribe to that. I think that there has been too much encouragement as to how much there would be but this is not what this majority group, the Seabed Committee, now wants. They want to have an exclusive operating organization so that nobody else can mine beyond the area of jurisdiction except perhaps as they are brought in as a joint venture.

I had given to me—I misplaced it right now—a remark of the Peruvian representative to the Seabed Committee in Geneva in July who said the purpose of this was that this company would prevent anybody from competing with the land-based mining company. So there is not going to be any money from hard minerals because there is not going to be any mining of hard minerals because these countries do not want the competition.

Now this country can't sit by and see its concessions being taken away and this country and that country and then have our hands tied and say we cannot go out into the ocean and recover these strategic metals that are essential to us for our economy, for our defense.

My difference with Professor Knight is not on objectives, it is in tactics. He thinks that by our being nice for the next 10 years we are going to get a nice organization. If its purpose is not to develop resources, I don't know what its purpose is unless it is to prove Parkinson's law over again.

Mr. DELLUMS. Yes, Mr. Knight.

Mr. KNIGHT. I would like to respond to Mr. Dellums by saying I disagree with one technical point. I don't think anyone believes it is appropriate to give the United Nations, as presently structured, an independent source of income. Neither the Soviet Union nor the United States is willing to do that now. Otherwise, I would subscribe to your statement.

The problem is if there are to be meaningful amounts of revenue for an international oceans organization, we cannot extend national jurisdiction over the resources of the seabed to the edge of the continental margin because that excludes about 99 percent of the potential and all of the present revenue derived from the oceans. The U.S. Draft Convention would, of course, come back to the 200-meter isobath line and would provide 50 to 66⅔ percent of the royalties, bonuses, and other moneys collected between the 200-meter isobath and the edge of the margin for international purposes.

The U.S. Draft Convention is a nationalistic proposal since it gives the coastal state virtually complete discretion to say if, where, when, what, how, and by whom the resources are to be exploited out to the edge of the continental margin. At least it has the revenue sharing for international purposes. I think the key issue is what area is going to be subject to the international regime.

Mr. FASCELL. Mr. Ely.

Mr. ELY. Mr. Dellums, in answer to your question of course it is desirable for the United Nations to be adequately funded. As to the possibilities of funding from seabed minerals, the problem is divisible into two parts, one relating to the continental margins, the other relative to the abyssal floor. On the American continental margin Congress may desire a policy of nondevelopment; it may not want oil wells drilled in Santa Barbara channel, for example. It may not want oil wells drilled off the New England coast. It may decide to preserve the resources, as against the making of revenue. An international regime whose objective is to get as much money as it can for the United Nations may have the opposite objective.

And, with respect to the American continental margin, who shall make the decision as to the appropriation of revenues? Shall it be the Congress or shall this power have been delegated by treaty to an international legislation? I would rather have the decision made by the Congress as to how much of the revenues from petroleum or other minerals in our continental margin are to be dedicated to foreign assistance and in what form, than I would to have had this power irrevocably delegated to some organization other than the American Congress.

The second area is the abyssal ocean floor. The continental margins, in the nature of things, being shallower, will be developed first, as far as petroleum is concerned. Petroleum development on the deeper abys-

sal floor is not likely to take place until the more accessible, less hazardous areas of the continental margins are first developed.

The development on the abyssal ocean floor in the next decade, perhaps 2 decades I am told, is more likely to be a harvesting of manganese nodules, and the technical ability to do this is just around the corner.

It is quite apparent that you are not going to have any great gold rush in the nodule business. You will have probably not more than a dozen expeditions, if that, being operating at one time in all of the oceans of the world. They must operate on a very large scale to be economically attractive. They probably involve hundreds of millions of dollars for each venture.

The technical problems are not yet solved, but assuming they are so that you either smelt test nodules on board great smelter ships or you find ways to haul them to shore and stockpile them.

As Mr. Laylin has said some of the developing nations are sufficiently alarmed about production of copper, cobalt, nickel and manganese that they want to invoke what they call resource management to hold down the production of these seabed minerals if the effect is to lower the price of onshore minerals. The American consumer's interests are diametrically opposed to such suppression of production. We want the maximum quantity of minerals at the lowest cost which will attract the capital necessary for their development, and we want it without restraints of trade imposed by cartels, governmental or otherwise.

Consequently, it is difficult to reconcile the three points of view here, Mr. Dellums, involved in answer to your question. Within the developing nations themselves there are two opposed points of view. One is get all the money you can for the United Nations out of deep sea mineral development. The other point of view—that of the developing nations that have the copper or nickel or cobalt production—says, don't do that, because you do not impose restrictions on seabed production it is going to shut our on-shore mines down.

The third point of view is that of the consumer who says we want all the minerals we can get at the lowest prices consistent with the fair return required to attract capital to that risky business. So I would say that the probabilities are that deep sea mineral development is not an attractive source of income on a large enough scale to finance the operations of the United Nations. It should produce revenue, but Ambassador Pardo's initial speech that touched off all this excitement that the United Nations could have $8 million a year in revenue from minerals by 1975 was a most unfortunate and poorly advised statement. It started this illusion that there are great riches on the sea bottom, that the technically advanced countries are somehow holding back on this and could go get them if they wanted to. This is simply not so.

Mr. FASCELL. Mr. Ely, assuming that—and I might be inclined to concur in that, the economics of the proposal have been overstated—what about the political reality of the situation? As I understand what you are saying, we make no decision with respect to the deep seabed. That is fine if you could stop it. I don't see how you are going to stop a decision on the subject.

You say we can stall. We have done pretty good so far, it seems to me. I don't think you are going to stop it for very long regardless of the economics because it is a political, psychological problem.

Mr. ELY. If I might undertake to answer that, Mr. Fascell, we cannot predict the outcome of the negotiations in the Seabed Conference, if one comes about at all in 1973 or 1974.

Mr. FASCELL. It is going to come about, but what is going to happen?

Mr. ELY. If the end result is a convention, then if the convention appears to be taking the form that is now signaled—namely, a form which I regard for my part as inimical to the interests of the United States.

I think that the time is coming when the Congress of the United States has to send a message that a new convention which impairs the rights of the United States, and gives away a high proportion of the revenues from the continental margin, is not going to be ratified with the advice and consent of the Senate and a regime which denies to American industry access to the resources of the deep seabed beyond the limits of national jurisdiction, except on the decision of a body which may be determined not to see these resources developed in order to hold up prices on shore, is a convention that is not going to be ratified, either. I don't think this is beyond our control. We can go along very well as we are under the convention on the Continental Shelf.

Mr. FASCELL. You mean on the depth of exploitation as far as technology goes without regard to distance or depth?

Mr. ELY. Yes.

Mr. FASCELL. Suppose everybody claims to the mid-point. Does that limit the U.S. oil exploration because nobody is going to give you a license?

Mr. ELY. In my view the Convention on the Continental Shelf does not give any coastal State a right to the median line of the ocean; its rights are restricted to the Continental margin. This is a strawman.

Mr. FASCELL. Why not? If you can drill oil in the middle of the ocean, what difference does it make?

Mr. ELY. If that is done, it will not be under the jurisdiction of any license granted by a coastal state.

Mr. FASCELL. No; I understand.

Mr. ELY. Because the convention restricts the coastal State's jurisdiction to the prolongation of its land mass.

Mr. FASCELL. Suppose we settle legally the question of the high seas and the right to claim jurisdiction over water. Does that include the air space and the ground underneath?

Mr. ELY. With respect to the ocean resource, it is necessary to draw a distinction between jurisdiction over the seabed, and jurisdiction over the water above.

Mr. FASCELL. I know, but will that distinction be drawn? That is the whole point.

Mr. ELY. The distinction is between the rights in the seabed, the real estate, controlled by the doctrine of the Continental Shelf, and the water column and overlying air space. These are not affected.

Mr. FASCELL. I understand that but if the convention meets in 1973 and it reaches an agreement with respect to sovereign rights which may not be to our liking because we don't have the votes to control it, then where are we legally?

Mr. ELY. Well, you pose a most serious question. Obviously if the convention says that beyond the limits of national jurisdiction, whatever they may be, that a new international agency shall have a

monopoly in developing the resources of the seabed and that it shall be the operator—I would say that that as a result that cannot be accepted by the American Congress.

Mr. FASCELL. I understand you on that.

Mr. ELY. If it takes another form and says, no, we don't go that far, but nobody can operate in the deep seabed without a license from the new organization, then if the United States does ratify that treaty, of course it is bound by it. If it does not, and says we decline to accept this concept of international law as giving to any agency the right to deny the freedom of the seabed, like freedom of the surface of the sea, then I would say that American companies are not controlled by this newly invented law of the sea, to which their country is not a party. If an American company now operating in the deep seabed under legislation such as that Mr. Laylin has referred to proceeds, it is entitled to invoke the protection of the American flag for its operation. This would be a thoroughly unfortunate confrontation obviously.

Mr. FASCELL. That is what we are talking about.

Mr. ELY. I think for that reason the way the discussions are headed in the U.N. Seabed Committee toward creation of that sort of international regime it is disadvantageous to American interests.

Mr. FASCELL. Mr. Ely, the confrontation we are talking about is a very real thing, it exists right now in terms of oil. I get the suggestion from you that the confrontation will never arise and that there are two global navies primarily, the Russian and the American, and that it will just come down to a declaration of war or bluff.

Mr. ELY. No, I have not said that.

Mr. FASCELL. No, but that is the logical extension of your position as I understand it.

Mr. ELY. No.

Mr. FASCELL. You better correct me then.

Mr. ELY. Yes, I am glad to have the opportunity. Under international law as it now exists, as I understand it, by the terms of the decision of the International Court of Justice in the North Sea cases and by the parallel terms of the convention on the Continental Shelf, the jurisdiction of the coastal state over the seabed resources extends to, but no further than, the limits of the continental margin to which it is adjacent. That is to say, in the case of the United States it does encompass Santa Barbara channel although that is deeper than 200 meters and extends beyond the 13 miles. It does not encompass the seabed between California and Hawaii because that is far beyond the limit of the continental margin. And by the specific terms of Article 3 of the Convention this seabed jurisdiction does not affect the status of the overlying waters as high seas.

Mr. FASCELL. Let's get back to the other problem which is the question of title, sovereignty. Let's assume for the moment that a convention is held and a sovereignty decision is made. Whether the United States agrees to it or not may be another story entirely. The question is, let's assume the majority of states—coastal countries and other countries—agree on sovereign rights. They change the whole law of the high seas. Assume that claims of sovereignty going out to 200 miles or 300 miles are agreed to and they eliminate the distinction between the water and the seabed resource. This is where we are headed.

Mr. ELY. Somber as I think the prospect is, I don't think really that is where we are headed.

Mr. FASCELL. Well, there we have a difference in scenario. You know, if we could hold the status quo and get to the problem, fine. Then everybody grabs the best hold they can.

Mr. ELY. I would say on the American continental margin it is totally unlikely that a convention which attempted to vest in an international regime the control of the development of our continental margin beyond 200 meters would be ratified by the Senate.

Mr. FASCELL. I am not arguing that.

Mr. ELY. It would not be enforcible against the United States.

Mr. FASCELL. I am not arguing that.

Mr. ELY. I thought that was your question.

Mr. FASCELL. No. I am not talking about who is going to have the right to license, we are talking about sovereignty.

Mr. ELY. So am I.

Mr. FASCELL. The same thing people go to war about.

Mr. ELY. I am, too. I am saying the sovereignty of the United States encompasses the exclusive right of petroleum operations on the American continental margin. An international regime which attempted to deprive us of that, and say that Congress' power stops at the 200-meter line, should not be respected, as invading the American sovereignty.

Mr. FASCELL. I understand that and that the high seas are open and therefore open to exploration by anybody who has the technology to do it.

Mr. ELY. No, that is a different question.

Mr. FASCELL. I don't see why it is different.

Mr. ELY. By high seas I take it you mean the area beyond the continental margin.

Mr. FASCELL. I mean the area you are not interested in, the abyssal sea or whatever that expression is, the deep sea. When technology gets out to the deep sea, what do we do?

Mr. ELY. When it gets out there I think that Mr. Laylin has a point—it is going to take 5 years to negotiate this convention, it will take another 10 years to get it ratified. It took 8 years for the negotiation of the Continental Shelf Convention. So you are going to have a stalemate, denying these resources to the consumers, or you are going to have to devise some interim method of operation. That is a hard choice. I don't want to see these resources, whatever they may be, withheld from consumers for another 20 years. I don't know whether S. 2801 is the answer but some interim arrangement is necessary.

Mr. FASCELL. I am not so sure that I really quite follow that because on the one hand the economics are real bad and on the other hand they are withholding something from the consumer which he has never had.

Mr. ELY. I take very little stock in any seabed manganese. Copper, cobalt, nickel are more likely.

Mr. FASCELL. How about petroleum?

Mr. ELY. Petroleum is not likely to be sought in the abyssal ocean floor for a very long time.

Mr. FASCELL. Right, until you have all the other close-in petroleum first.

Mr. ELY. Yes. Continental margins are closer and shallower; they are expensive enough.

Mr. FASCELL. I am struggling very hard to get past the idea that what we really need for the benefit of the United States is the status quo.

Mr. ELY. The status quo under the Continental Shelf Convention operates admirably; it controls the continental margin.

Mr. FASCELL. That one issue, yes, but that ignores all the other issues.

Mr. ELY. If you are asking me as to petroleum, there is no question but that the Continental Shelf Convention as it stands adequately protects the American interests, because the sedimentary deposits are primarily on the continental margin.

Mr. FASCELL. I would not argue that point, I am beyond that. I am looking at more problems.

Mr. LAYLIN. Congressman, you said this is something that the American consumer has never had. We have always had the right to go out and mine this copper and nickel and cobalt. We have not had the technological capability.

Mr. FASCELL. Yes.

Mr. LAYLIN. We have been losing reliable sources of supply of strategic metals in Zambia and Peru and Chile, and the American people need a substitute source of their supply.

Mr. FASCELL. You mean because they unilaterally claim sovereignty over the ocean?

Mr. LAYLIN. They claim by a paper majority in the General Assembly they can stop our going out there and mining this.

Mr. FASCELL. They have done it a lot easier than that just unilaterally. If they are strong enough to do it, that makes international law.

Mr. LAYLIN. They are not.

Mr. FASCELL. Then we are going to go to war with every country that claims 200 miles or 400 miles.

Mr. LAYLIN. No.

Mr. FASCELL. That is the issue.

Mr. LAYLIN. They are the ones who are going to create the issue. We are rightfully entitled to do that, and if they want to send a warship out beyond their coastal limit, they will do it.

Mr. FASCELL. I realize that. I realize we are trying to do some preplanning here to avoid that condition so we don't get boxed up like we have been going to war over $5 million of tuna.

Mr. LAYLIN. I would like to make a point of order. I think Mr. Ely's statement on the McKelvey report is not entirely accurate and if I have permission to put that in the record or if Mr. Ely has permission to consult——

Mr. FASCELL. This is on the effect.

Mr. LAYLIN. He said in the United Nations and the Secretary agreed that the mining of the manganese nodules would have no effect on the mining of copper or nickel.

Mr. ELY. I didn't challenge that. I referred to cobalt.

Mr. FASCELL. I think it would be useful for us, if we don't have it, to get that resource potential study, Mr. Chairman.

Mr. ELY. It is excellent, it should go in the record.

(The material follows:)

U.S. MISSION,
U.S. INFORMATION SERVICE,
Geneva, August 4, 1971.

STATEMENT BY DR. VINCENT E. MCKELVEY, CHIEF GEOLOGIST, U.S. GEOLOGICAL SURVEY

The subject of the economic implications of sub-sea mineral production beyond the limits of national jurisdiction has two aspects, both of which have been of concern to the Seabed Committee from its inception. One relates to the direct and indirect economic benefits that such production will yield. The second relates to possible adverse effects that seabed production might have on land producers, particularly those in developing countries that depend upon the export of minerals for a large part of their foreign exchange and, in some cases, a large part of their national income as well. Both aspects must be kept clearly in view, for I am sure that all delegations would agree that our fundamental objective is to provide for the useful development of seabed resources for the benefit of mankind. In reaping these benefits, however, we want to be sure that we do not suffer undesirable consequences, including those that might arise from economic setbacks to land producers.

In March I described briefly the substantial progress being made in the development of seabed exploration and exploitation technology, and indicated the high probability that within the next decade it would lead to the production of petroleum from the continental margins beyond the 200 meter depth and to the production of metals from manganese oxide nodules on the deep ocean floor. I stressed the uncertainty as to the volume of production that might be achieved in any given time frame, but I emphasized also that a beginning is plainly in sight that promises to yield meaningful economic benefits in the years ahead.

The May 28 report of the Secretary General (A/AC.138/36) on the possible impact of seabed mineral production on world markets supports these general conclusions, and provides additional data and projections useful in judging the effects of anticipated production on the prices and markets of the minerals involved. I wish to compliment the Secretary General on the excellence of his report. It maintains the high standards that we have come to expect from the Secretariat in the reports prepared for this Committee and it should prove to be a most useful document. I may say further that in our own analysis of the problem we have tended to favor slightly different projections of future production, but that we generally concur in the substantive aspects of the report. Some of our interpretations of the data and projections, however, lead us to somewhat different conclusions, which I will mention later on. To give our conclusions perspective, I will describe briefly the salient features of our assessment of future seabed mineral production and its effects on prices and markets, beginning with petroleum.

World production of liquid fuels in 1969 was about 15 thousand million barrels. Its probable production will be in the range of 25–30 thousand million barrels in 1980 and 60–75 thousand million barrels in the year 2000. Offshore production now provides about 18% of the total and it may supply 30–40 percent of it in 1980 and possibly 40–50 percent of the total in the year 2000.

It is difficult to predict how much of this production may come from beyond depths of 200 meters. In an earlier report, I speculated that it might be on the order of 500–1,000 million barrels by 1980, but the Secretary General indicated in his report that 500 million barrels a year by 1980 could be considered a high figure. A greater production than one thousand million barrels or so a year from beyond 200 meters is unlikely because ample supplies of liquid fuels should be available from other lower cost sources. Moreover, it takes considerable time to achieve major production in a new province. For example, it has taken about 25 years to achieve an annual production of a thousand million barrels from the Gulf of Mexico. Nevertheless, the prospect for discovery of giant fields, containing on the order of 500 to 1,000 million barrels or more and from which petroleum can be produced at costs of low enough to offset the higher cost of installations in deep water, are certain to attract exploration and to lead to production that may be expected to increase gradually over the years.

Whatever the amount that comes from beyond the 200 meter depth during the next decade or two, it is certain to represent only a minor proportion of projected world production. In fact, it will not even satisfy the increment of

new demand. With the average annual growth rate of about 7 percent anticipated for the next decade, the increment of new demand in 1980 would be about 2.3 thousand million barrels—more than four times the 500 million barrels considered by the Secretary General to be the maximum probable production from the seabed beyond the 200 meter depth by 1980. Although the rate of growth for petroleum production is expected to diminish after 1980, the Secretary General's projection indicates that new demand in 1990 would be more than 3,000 million barrels.

Although petroleum accounts for 10 percent or more of the exports of 13 developing countries and makes up more than 10 percent of the gross national product of nine of them, none of these countries will be adversely affected by the production anticipated from the seabed beyond a depth of 200 meters. In fact, increasing demand seems certain to expand their markets steadily through the end of the century. Moreover, there is no danger that production beyond 200 meters will lead to a decrease in the price of petroleum on the world market. Because of the higher costs of deep water petroleum exploration and production the problem for deep sea producers will be to meet competition from the lower-cost operations in other environments, and this combined with the expanding total demand eliminates any possibility that deep seabed production will depress petroleum prices.

Thus far I have been speaking of liquid hydrocarbons. Natural gas is also produced offshore, but offshore sources thus far supply only about six percent of total production. In many parts of the world, gas has been an under-utilized resources because of the difficulty of transporting it to markets. It has not entered much into world trade, and even in areas near markets, such as the Gulf of Mexico, growth in its production has lagged longer behind discovery than that of crude oil because of the time required to solve transportation problems. With advance in pipeline technology, however, and in the transport of gas in liquified form, its role in international trade is much increasing. Total world gas production is expected to increase from about 34 trillion cubic feet in 1969 to about 160 trillion cubic feet in the year 2000—nearly a five-fold increase compared to the four-fold increase projected for petroleum over the same period. The percentage of the total produced offshore is likely to increase considerably. No one has speculated on how much might come from beyond the 200 meter isobath but because of the time lag in solving transportation problems, deep water production of natural gas probably will grow more slowly than that of crude oil. Whatever the amount, it is certain to be only a fraction of new demand and will pose no threat to the markets of land producers.

Let us turn now to the recovery of metals from the manganese oxide nodules on the deep ocean floor. The principal metals contained in the nodules are manganese, nickel, copper, and cobalt. Joint-product recovery of nickel and copper from nodules is considered feasible by 1975 or 1976. Cobalt could also be recovered provided there is a market for it; cobalt is used now only in rather small amounts, but inasmuch as some of the potential uses of cobalt are similar to those of nickel, it is possible that at lower prices cobalt may be sold as a nickel substitute. Manganese recovery from the nodules is less probable because it would have to be produced as a high-purity metal, the market for which is small. One company believes it can recover and market manganese metal to a limited extent, but it is generally recognized that the principal production of nodules will be directed toward recovery of nickel, copper, and possibly cobalt.

A viable operation requires joint recovery of both nickel and copper. As pointed out by the Secretary General, it would not be possible to mine nodules for their copper content alone, for the gross revenue from production of copper alone would be only a third or less of the estimated cost of recovery.

As with petroleum, world demand for these metals is expected to continue to increase. Estimates of the rate of increase in demand vary considerably, but in the Secretary General's analysis, manganese and cobalt will increase five percent per year and nickel and copper six percent a year through 1980. At these rates, the annual increase in demand by 1980 would be about 690,000 tons for manganese, 660,000 for copper, 66,000 for nickel, and 1,800 for cobalt.

The metals do not occur in the nodules in the same ratio in which they are consumed in the world market. As pointed out by the Secretary General, for each ton of cobalt produced from nodules of the composition being considered for mining, it would be possible to obtain 97 tons of manganese, 4.9 tons of copper, and 5 tons of nickel. World demand for these metals is in completely

different proportions. For each ton of cobalt consumed in 1968, the demand was for 381 tons of manganese, 279 tons of copper and 27 tons of nickel. If all of the 1968 demand for nickel had been met by nodule production, there could have been a simultaneous production of 5.4 times the 1968 requirement for cobalt, 1.4 times the requirement for manganese, but only about 10 percent of the world requirement for copper.

Those now considering the production of nodules believe that an efficient production unit, including both offshore and land components, would be an operation mining and processing about 1,000,000 tons of dry nodules per year. The capital cost of such a production unit is estimated to be about $180,000,000. At the concentration and recovery of metals being assumed, one such production unit would yield 279,000 tons of manganese per year (if it could be recovered profitably), 14,000 tons of copper, 14,440 tons of nickel, and 2,880 tons of cobolt.

Compared to the increment of new demand expected in 1980 for these metals, a single 1,000,000 ton operation would yield about 41 percent of the increase in demand for manganese, 2 percent of that for copper, 22 percent for nickel, and 160 percent of that for cobalt. If, as seems probable, cobalt is sold as a nickel equivalent, the combined nickel and cobalt production would be equivalent to 25 percent of the increment of new demand. As I mentioned earlier, it seems most unlikely that manganese metal can be produced cheaply enough from seabed nodules to compete with natural oxide and carbonate ores in most of their uses. If, as seems probable, manganese is not produced in large quantities from the nodules, and cobalt becomes a nickel substitute, interest would focus on new demand for nickel and cobalt combined.

The production from four production units of the type described would be needed to meet the new requirements for nickel and cobalt in 1980, and four more could be added each year without reducing the market for these metals from land production. In view of the high capital cost of each unit ($180,000,000) it would be difficult to add seabed production units at such rates, much less at rates designed to take over a larger share of the market for copper.

The availability of capital may well prove to be a limiting factor in the rate of growth of nodule production. Even if it does not prove to be so, it is highly unlikely that the producers will attempt to expand production at rates that would exceed the increase in demand. Many of the potential nodule producers are ones that have substantial investments in land operations, and it is against their own interest to flood the market. Other potential producers not having interest in existing land production also would not wish to flood the market, for they might then have to contend with prices too low to permit a profitable operation. But if in spite of such constraints, metal production from nodules were to expand rapidly, the pressure on prices would be focused mainly on cobalt, to a lesser extent on nickel, and to a much smaller extent on manganese, if its production proves economically feasible at all. It does not seem possible under any circumstances that nodule production could have any impact on the price of copper.

In the event that seabed production were to influence prices, what developing countries would be affected? Cobalt contributes 5.2 percent of exports and 0.2 percent of the gross domestic product of Congo (Kinshasa), which is the world's largest producer of cobalt, and it supplies a fraction of a percent of the exports of Zambia and Morocco. New Caledonia (a French territory) is the only developing area in which nickel production makes up a substantial part of its gross domestic product or of exports, but nickel also makes up 5.9 percent of Indonesia's exports (but only 0.6 percent of its gross domestic product) and 2.1 percent of Cuba's exports. Manganese forms 21.2 percent of exports and 12.7 percent of the gross domestic product of Gaban, 3.3 percent of exports and 0.45 percent of the gross domestic product of Ghana, and contributes one percent or more of the exports of only two other countries, Congo (Kinshasa) and Brazil. Copper contributes more than 3 percent of exports in nine countries (Zambia, Congo (Kinshasa), Chile, Peru, Philippines, Uganda, Haiti, Bolivia, and Nicaragua), but as indicated above, the market and price for copper can hardly be affected by seabed production from nodules.

The most probable outcome of nodule production is that the price of cobalt would drop to that of nickel. Inasmuch as cobalt in Congo (Kinshasa) is recovered as a by-product of copper, its production there would continue, but lower prices would result in some loss of export value. Any adverse effect on the market or price of nickel would be small, and in developing areas would be felt mainly in New Caledonia. It is hardly conceivable that electrolytic man-

ganese could displace the high grade oxide ores from Gabon and Ghana, but if there were downward pressure on prices it would reduce somewhat the value of their exports.

As the Secretary General concluded, it thus seems improbable that production of the metals from the seabed will adversely affect any country to a major extent, and it is unlikely that ill effects would be felt by more than a few countries. None of us, however, would want to see even a single country suffer from the development of seabed resources. As I already mentioned, we can count to a considerable extent on voluntary control by the producers themselves to prevent such effects, simply because they will wish to maintain favorable prices and may themselves fail if prices fall substantially. But in what other ways could adverse effects be avoided?

Several possible solutions have been suggested by the Secretary General and others. First there is the possibility of artificial control of production from the seabed to keep it at levels that would not interfere with land production or prices. If such controls were of a nature that could reduce production from a unit operation once it began, they would add substantially to the risk involved in seabed exploitation and would discourage exploration and production. Thus, the potential benefits to the international community would be much reduced.

A second alternative, global controls, would not discriminate against seabed production, for they would presumably apply to producers irrespective of the location of their mines. Such an agreement has been reached for tin, and in discussing this subject previously we have urged that if production controls be considered, they be considered only in such a global context. We cannot fail to recognize, however, that such agreements tend to favor established producers as opposed to new entrants in the market. For this and related reasons global agreements are difficult to achieve. In passing, I may note that the threat of disruption to land producers comes much more from potential new developments in other countries than from the seabed. Thus, whereas seabed metal production has not yet been proven to be economic, new high-grade deposits are still being discovered on land in many parts of the world. Moreover, processes are continually being developed that will permit the economic production of previously marginal resources on land. For example, the nickel-bearing laterites of Australia, Indonesia, the Philippines, and other countries in Southeast Asia are being developed now and will yield not only nickel but cobalt also. Increased secondary recovery of metals from scrap—an objective likely to receive increased attention for environmental and conservation reasons—will have the same net effect on producers as will new mines.

A third means of controlling production would be to limit the issuance of exploitation licenses to a rate judged appropriate to maintain a balance between land and sea production. If the terms of the license itself were such that no controls could be imposed on production once it began, such a procedure would not have as depressing an effect on exploration as would direct production controls. Nevertheless, limited issuance of licenses would tend to discourage exploration, for the prospector would have no assurance that successful efforts in exploration would lead to the production necessary to recover his costs. Moreover, because such a form of allocation would be a clumsy form of control, it probably would not be very effective in achieving its purpose.

Rather than limiting the size of the area to be licensed, a fourth approach that has been suggested for production control is to issue a license for a specified amount of annual production of metal and to limit the number of such licenses to that necessary for market and price stability. Such a system would avoid the uncertainty for the producer of *ad hoc* production controls and would be somewhat more effective in achieving whatever production limits might be established from time to time than would a limit on the total area to be licensed. The system would tend to discourage exploration, however, for the prospector would have no assurance that success would be rewarded with a license. Moreover, with each license permitting a specified production over its life, unexpected imbalances that might arise as the result of new land production could not be dealt with in time to avoid price fluctuations.

A fifth idea, introduced by the Secretary General, is that of imposing some sort of a tax on the consuming countries that might benefit from a drop in price at the expense of producing countries. Such an arrangement would be even more impractical to achieve than global control on production. Keep in mind that all of us are consumers and that whereas some producers may have suffered in the past from a drop in price of mineral commodities stemming from new discoveries

or technological advances, all of mankind has benefitted from the resulting greater availability of raw materials. It would be hard to say what the price of copper would be if it had been maintained at the level existing when it could be produced only from deposits of the native metal, but it is safe to say that it would be $25 a pound at least. Producers able to recover copper profitably now at 50 cents per pound certainly would have a large profit at such a rate on a unit of production, but they would not have much of a market nor would we be able to afford the benefits of the use of copper in the many products in which it is an integral part. The benefits of lower prices resulting from past advances in technology have already been important to the peoples of the developing countries, and they will become even more important in the future as developing countries further industrialize and increase their consumption of energy and raw materials.

A sixth procedure, also suggested by the Secretary General, would be that of compensatory payments by the international machinery to the countries affected by declines in export revenues. In view of the fact that a few countries at most could be adversely affected, at first sight some form of direct compensation has the appeal of simplicity, and the cost might not be large. For example, if the price of cobalt were to drop to that of nickel—and this is the most probable adverse effect of seabed metal production—the decrease in the annual value of cobalt exports from Congo (Kinshasa) would be about $15 million. As pointed out by the UNCTAD report on manganese, attached as Annex 2 to the Secretary General's report, growth in demand is likely to be enough to forestall any drop in price even if manganese recovery from the nodules proves economically feasible; but if the price should drop, the decrease would be of the order of a few dollars per ton, and for a country such as Gabon, the effect would be a decrease in foreign exchange earnings of the order of $5 million or so a year. The amounts required to compensate for such losses over a period sufficient for adjustment would thus not be large.

Such a system of direct compensation, however, would have one extremely important disadvantage, namely, that of the difficulty of identifying the origins of a drop in price or a decrease in market opportunities, and assessing the portion assignable to specific sources. Many factors affect the price and demand for raw materials besides the development of a new source of supply. It would be difficult, therefore, to identify the cause of any specific fluctuation, and to assess the extent to which it is attributable to seabed production.

Nevertheless, my government would be sympathetic to the plight of any country that would be adversely affected by seabed production, and believes that there is merit to some kind of a direct approach. What a country so affected needs, of course, is not just the dollar equivalent of its loss, or protection that guarantees a market for products that are not saleable at competitive prices, for these are at best only temporary solutions. What it really needs is to find other ways to maintain and expand its economy and to adjust to a new situation. Accordingly, it may be desirable to explore the possibility of using some portion of the revenues collected by the International Seabed Resource Authority for preferential technical assistance to developing countries adversely affected by seabed production to help them broaden their economic base.

With respect to revenues, the Secretary General has suggested in his report two means of collecting revenue from the production of nodules, one a fixed amount per unit of nodules mined, and the other a fixed percentage of the market price of the metals produced. On previous occasions in this Committee, I have pointed out the problems of finding an equitable means for the collection of economic rent from nodule production, and have mentioned these among other alternative solutions. Both have their advantages and disadvantages, and whereas neither is perfect, either would probably work, provided the level of payment established is one that permits the producer to obtain a reasonable return on his risk investment and operations.

With reference to the Secretary General's suggestion that rules be established under which developing countries could purchase part of their crude oil requirements from the producers in the area under more attractive provisions, I may point out that under the U.S. draft convention, the great bulk of petroleum to be produced beyond the limit of national jurisdiction would come from the Trusteeship Zone, in which the Trustee Party would have the authority necessary to negotiate favorable purchase terms in conjunction with the issuance of licenses.

In summary, Mr. Chairman, we believe that seabed production of oil and gas will produce no adverse effects on land producers. We agree also with the Secretary General that any adverse effects from the production of metals from the manganese nodules will not be large, and at worst will be felt to a minor

extent by only a few countries. Rather than imposing a system providing for the regulation of production, however, we believe it would be far better to design a regime that will encourage seabed exploration and exploitation and to be prepared to consider appropriate measures to ameliorate the effects on countries adversely affected by seabed production.

Mr. LAYLIN. Now the American delegation threw out the idea that if the two or three nations that have a practical monopoly on cobalt, if their economies are seriously affected there would be other ways of helping them to get over the maladjustment. Certainly we don't want to have our hands tied to the supply that comes from just two or three countries because of the ill-effects that it might have.

Mr. ELY. Mr. Laylin is mistaken. The point I attempted to make is that you don't have a police problem of handling thousands of companies out there in the seabed, you have perhaps a half a dozen. This is a soluble problem, you don't need to create a new legislature, a new Supreme Court, a new bureacracy to handle this. What I was attempting to do was suggest that the solution is a whole lot simpler. Interim legislation may be a way to get at it.

Mr. FASCELL. I got that quite clearly. It may be that is the way to approach this thing is to agree on some interim posture. We have not been able to figure out 3 miles or 12 miles yet. I don't know when we are going to get around to this other.

Mr. LAYLIN. If I could, I would like to put this in context. President Nixon in his May 1970 announcement said:

Although I hope agreement on such steps can be reached quickly, negotiations of such a complex treaty may take some time. I do not, however, believe it is either necessary or desirable to try to halt exploration and exploitation of the seabeds beyond a depth of 200 meters during the negotiating process.

Now all we are asking for is implementation.

Mr. KNIGHT. In response to that may I suggest that I think the thrust—and I have, of course, to be guessing here—of the President's statement went to the resources, the oil and natural gas, within a reasonable distance from shore. The Draft Convention that ultimately implemented the Nixon proposal that contains a provision, article 73, on transition which provides for orderly development of these needed oil and gas resources until the convention could come into force.

May I also comment in response to the rather bleak picture painted for the consumer by Mr. Ely that appendix C of the Draft Convention provides that the trustee party shall have the exclusive right to approve or disapprove applications for exploration, exploitation, and licenses. This power is applicable all the way out to the edge of the continental margin. The coastal state says if, where, when, how, what, and by whom those resources are to be or are not to be exploited, if they so desire. All those resources off this Nation's coast will come to the American consumer. The only thing that will be going out is a percentage of the revenues which is part of the long-range adjustment of our foreign aid program anyway. So I don't think that this Nation is losing anything by this proposal or endangering any of its resources by this proposal.

Mr. DELLUMS. Mr. Chairman, to follow up on that, Mr. Ely contends in his statement that the status quo benefits the United States, but it is clear that the staus quo and the Truman proclamation are now being challenged and that the issue is not simply one of oil, but also navigation rights, fisheries, and a whole range of questions that go

far beyond the issue of oil. I am wondering how you can sustain the position that the status quo protects the United States when problems exist in many other areas that can touch off the kind of consideration that my distinguished colleague Mr. Fascell has already alluded to in his questioning.

Mr. ELY. The Convention on the Continental Shelf, I respectfully suggest, has not got us into any problem nor has the Truman proclamation of 1945. It is important to realize that these dealt solely with the real estate, the seabed.

Mr. DELLUMS. Would you agree it has touched off the current grab?

Mr. ELY. No, I do not. I think what has touched off the current agitation in the United Nations leading to a new law of the sea conference is a complex of forces that have really very little to do with the operation of the Convention on the Continental Shelf. The assertion to the contrary, by some others, that the Continental Shelf Convention leaves open the possibility of a grab by coastal states out to midocean is nonsense, because the coastal state's rights could go no further than the submarine areas adjacent to their coasts, that are prolongations of their own land territories. You cannot claim halfway to Hawaii as part of the American continental margin.

It is true that the rights in the seabed extend far beyond the territorial sea. In the North Sea, for example, England, with a 3-mile territorial sea, is recognized as having rights to grant licenses 200 miles from its coast. The International Court of Justice decision dealt with an area of 194 miles from Germany. But these seabed rights are limited, restricted rights dealing only with the control of exploration, exploitation of the seabed minerals. By the very terms of article 3 of the Continental Shelf all rights in the water column to navigation and airspace are unaffected. This is a seabed convention only.

The issue that somehow coastal States can claim seabed rights, minerals, out to midocean is a strawman; it has nothing to do with the reality. Nobody has ever asserted this or claimed, except a few academic writers; no nation ever has. What has created the commotion is primarily the claim of some of the Latin American countries to a jurisdiction not on the seabed but on the surface, the territorial sea within which they claim plenary authority over navigation out to 200 miles to control the fisheries. This has nothing to do at all with the rights in the real estate.

Mr. FASCELL. Why not? I don't understand that.

Mr. ELY. Because the Continental Shelf conversion by its very term gives no right in the overlying waters. It disclaims control of navigation.

Mr. FASCELL. It does not define sovereignty or ownership.

Mr. ELY. Yes.

Mr. FASCELL. How?

Mr. ELY. Article 2 says that the rights covered by this convention extends to the exploration and exploitation of the natural resources of the seabed and subsoil.

Mr. FASCELL. That is a right.

Mr. ELY. To exploration and exploitation.

Mr. FASCELL. That is a right.

Mr. ELY. Certainly.

Mr. FASCELL. It is not an ownership.

Mr. ELY. Right. Sovereign right.

Article 3 says that this convention does not affect the status of the superjacent waters as high seas or the airspace.

Mr. FASCELL. Right, and it might as well say, Mr. Ely, with all due deference to your legal knowledge, that it does not affect the sovereign claim to the land itself because the treaty does not deal with that.

Mr. ELY. The treaty deals with what it calls sovereign rights.

Mr. FASCELL. That may be sovereign ownership.

Mr. ELY. The drafters of the treaty wrestled that problem and came up with this expression, "sovereign rights."

Mr. FASCELL. It seems to me that if the question of ownership is in the international law, then it has not been decided yet. You are telling me it has been decided by the convention. I just don't see that.

Mr. ELY. The convention is explicit, Mr. Fascell.

Mr. FASCELL. Look, we are good lawyers. You can take one side and I can take the other, and we can make a lot of money off our clients, but that does not resolve the issue of title.

Mr. ELY. But sometimes there is a vast distinction between a lot of work and a lot of money.

Mr. FASCELL. And no money.

Mr. ELY. I have asked to put into the record the text of the Convention on the Continental Shelf.

Mr. FASCELL. Without objection.

(The material appears at p. 48.)

Mr. KNIGHT. I would like to ask Representative Fascell if he is concerned with the phenomenon labeled by the Department of Defense as "creeping jurisdiction"—that limited rights for one purpose tend to creep into more extensive claims because there is not any law, national or otherwise, governing them?

Mr. FASCELL. It is the same old question of international law, who makes it, and how is it made?

Mr. KNIGHT. One of the answers to that, and it is implicit in the U.S. Draft Convention, is that we treat this area as an international area, letting all residual rights lie in the international institution, and then we parcel back to the States the rights necessary for resource exploitation.

Mr. FASCELL. That still does not determine ownership.

Mr. KNIGHT. That is correct; it only gives States limited rights. The theory is that by placing the residuum of these rights in the international institutions, national jurisdiction can no longer "creep." I don't agree with this concept completely myself, but that is the Government's position.

Mr. FASCELL. I understand that theory; at least it has a place for that issue somewhere rather than leaving it unresolved.

Mr. KNIGHT. Precisely, which I think is of substantial advantage.

Mr. FRASER. I am interested in one particular statement you made, Mr. Ely. In the oil industry, I think you said that the interest of the American public is in the lowest cost access to these resources without restraint. The petroleum industry has always been in favor of quotas to prevent the flow of oil from abroad. Would you explain that apparent contradiction?

Mr. ELY. I have no authority to speak for anyone in the petroleum industry, but my observation is that there are very sharp differences of opinion on the very point you identify.

Mr. FRASER. Is it not a fact that the quota is held to maintain domestic prices rather than if foreign competition had been permitted?

Mr. ELY. I think this is correct.

Mr. FASCELL. The foreign price is up to where it meets ours now.

Mr. ELY. Whether it is a good result or bad, foreign prices are going to rise to the level of American prices.

Mr. FRASER. It would be helpful for me to see how far all of you go with respect to the draft convention. For example, I suppose on the idea of the 12-mile territorial limit, none of you have any particular problem.

Mr. LAYLIN. OK with me.

Mr. ELY. As far as I am concerned, I endorse the State Department's, the Department of Defense's, drive for a restriction on the extension of the 12-mile territorial sea where it involves the closing of straits.

Mr. FRASER. I should have said subject to the concept of free transit.

Mr. ELY. As far as I am concerned, I disagree with Professor Knight. I don't challenge the wisdom of the Defense Department in demanding free transit of straits.

Mr. FRASER. In any event, the 12-mile limit preserving the right of free transit. If we can win agreement on that, you don't find that objectionable. I gather Professor Knight would argue that that maybe this should not be a nonnegotiable item.

Mr. KNIGHT. If it could be negotiated without having to give up so much in terms of resource exploitation, I would not be so strongly opposed. I think in any case that we can survive nicely with the doctrine of innocent passage.

Mr. ELY. Might I carry this one step further. I would not trade off any interests in the American continental margin's resources under the illusion that by doing so I was going to get foreign nations to agree with our position on free transit of straits. We are trading with the wrong people. You are not going to get Indonesia, for example, to agree to relax its claims to exclusive control with Singapore and Malaysia, over the Malacca Strait by inviting Indonesia to join us in renouncing her sovereign seabed rights in waters deeper than 200 meters. Indonesia is just one example.

Mr. FRASER. Let's leave the negotiating position for a moment. Look at the draft convention itself. Perhaps the next item would be the so-called intermediate zone which, under the draft proposal, would be under some form of trustee arrangement which the coastal nation would have the authority to grant or attempt to grant licenses for exploitation but with a certain limited international right, first, to collect part of the revenues and second, to deal with problems such as pollution and other problems. On that part of the proposal what are your views?

Mr. ELY. As to the trusteeship proposal, I am against it. The objectives you have identified—namely, revenue sharing to the extent that Congress is willing to do it, the control of pollution, respect for other uses of the environment, all of the good things that President Nixon suggested as principles in May 1970—can all be accomplished without the roundabout and perilous device of renouncing what you now have and then getting back a trusteeship to administer what you had before.

These objectives are just exactly as though your neighbor wanted a path across your lot. You can let him have this without deeding your property to a bank and having the bank then contract back with you that you are trustee for your neighbor. That is the peril. Where is the residuum of power? It is to be determined by the interpretation of a contract that has already been subject to all kinds of interpretations, and eventually some hostile new tribunal may decide what it means.

I have no objection to the accomplishment of President Nixon's objectives. I am not as generous about revenue sharing as the working papers proposal to give away 50 to 66⅔ percent. We have been generous, more than any nation in the world's history, in giving $100 billion away for the good of foreign countries. No one can accuse our country of being niggardly.

We now say we will devote x percent of revenues from the continental margin to good purposes overseas, and if other nations would join with us it would be a fine thing to do. But that can be accomplished without deeding our property away and getting back a trusteeship. So also with control of pollution. I have no quarrel with President Nixon's five objectives; I do quarrel with this dangerous technique of burning down the house to roast the pig.

Mr. FRASER. Mr. Laylin.

Mr. LAYLIN. I disagree with Mr. Ely. There is no reason why we cannot list those things in the intermediate zone. They have dropped this idea of trusteeship in the intermediate zone. List the things that pertain to the coastal State, list the things that pertain to the international. The oil people get all they want—that has been forgotten long since.

I do go along with it to this extent. I do not think the treaty should say that the residual right is with either the international community or the national. Let international law figure this out in the future. Let's leave something to the next generation. We enumerate the things now that should pertain to the coastal State and that is the trend that is definitely moving.

Mr. FRASER. In other words, you see the intermediate zone as a mixture.

Mr. LAYLIN. Absolutely. The U.S. working paper, there is no use beating that dead horse—we are way beyond that now. We are working on other things. We are facing this majority of 77 people calling themselves the Group of 77 and right in the middle of a meeting they say, "We want a caucus," and everybody gets out. We cooled our feet for 2 hours one time. They are the ones that are running the show. That is why I say we should not let them lead us around with a ring in our nose.

Mr. FRASER. Mr. Knight.

Mr. KNIGHT. I would support the intermediate zone or mixed jurisdiction concept. I disagree with Mr. Ely, as I said in my statement, that this constitutes any give-away of national resources. In my opinion, there are no vested interests in resources beyond the 200 meter isobath so there can be no give-away. I think the mixed zone concept is a desirable compromise between international and national interests. If I had my choice, I would prefer an international regime from the 12-mile limit out, but that is not realistic or feasible. The fact that the Group of 77 finds the idea of a 200 mile economic resource zone

very popular means that we are going to have a difficult time getting even a system of mixed jurisdiction. I would, therefore, tend to support it in the form the U.S. Government submitted it.

Mr. FRASER. In other words, you see the struggle as one in which trying to preserve some international rights outside the 12 mile or the 200 meter depth is the principal problem that the United States and some other nations face?

Mr. KNIGHT. Yes, I think there is a very strong tendency these days toward nationalistic solutions. If you go "national" out to 200 meters, you have almost everything of value in that zone. Even if you create something beyond, it will be a token, will have no power, and will not deal with any amount of resources.

Mr. LAYLIN. Except the hard minerals.

Mr. KNIGHT. Except for the hard minerals.

Mr. FRASER. One thing about our present territorial rights or present rights in the seabed is that the 1958 convention as I understand it has some ambiguities in it. One ambiguity—maybe it is no longer one—is whether in referring to the further limit that permits exploitation they were referring to existing technology or technology that would come along in the future.

Mr. LAYLIN. It is revolving.

Mr. KNIGHT. I agree.

Mr. FRASER. That is a rather settled view at this point.

Mr. LAYLIN. Yes.

Mr. FRASER. Now with respect to the deep seas, that would be a totally international regime as I understand it on the draft proposal.

Mr. KNIGHT. Yes, sir.

Mr. FRASER. What differences would there be among the three of you in the draft proposal in that regard?

Mr. LAYLIN. Well, I think we all think that we can live with it. There are lots of little things in there that the hard mineral people don't like. For instance, as Mr. McKelvey has been mentioned here, it has been put into an annex that you had to get a license in order to explore. I think that that is just absolutely unenforceable.

Do you think the Russians are going to come in and tell the U.N. Secretariat where it is going to go and report what it has found, and the Japanese? The only people who are penalized by that are the conscientious ones. You have a lot of little things like that. I agree with Mr. Ely, you have this floating pagoda thing. Basically if we can get it, I think that is great.

Mr. FRASER. Presumably though to the extent that there are conflicts which might develop among nationals of different countries, someone is going to have to resolve them so in that sense there is going to have to be some kind of an authority that lays down the ground rules.

Mr. LAYLIN. Yes, and this does just this. It provides for licensing, not operating. That is the big issue right now. I said this in my statement, I don't need to repeat it. If these copper and nickel and cobalt exploiting countries had been away and this authority was the exclusive company to exploit the resources of the sea, there would never be any exploitation because they don't want the competition of their own landmined products. That is what they are after, and as long as they think that they can keep us from going out in the oceans now they are just going to keep on insisting on that.

Mr. FRAZER. In that regard within a 200-mile limit as is proposed, for example, by a number of Latin American countries, to what extent would the seabed resources be encompassed that would involve the metal nodules and so on?

Mr. LAYLIN. They are way beyond it. They are out in an area that under any definition is international, and this legislation says the same thing. It is not dealing with anything that is within this area as to where there should be special coastal State rights.

Mr. FRASER. Well, maybe I am having trouble understanding or recalling precisely how you formulate this, but you would accept an international regime provided it were not too complex?

Mr. LAYLIN. We want one.

Mr. FRASER. And one that would have the authority to license?

Mr. LAYLIN. Yes.

Mr. FRASER. And regulate completing claims?

Mr. LAYLIN. Yes. We think it is desirable. Without it, it is going to to be chaotic.

Mr. FRASER. Mr. Ely, would you agree?

Mr. ELY. So far as petroleum is concerned this is a much more distant problem that it is for the hard mineral people. I would regard a solution of this problem as being one upon which their concern is more in focus, in point of time, than the petroleum industry. It will be much further in the future before the comparitively meager sediments of the abyssal floor are explored in competition with the much thicker sediments of the continental margins.

To answer your question as to what type of deep sea regime beyond the continental margins is most conducive to production, the protection of the interest of the consumer and so on, I would say the simpler the better. Security of tenure is required; it will be several scores of times more expensive to attempt to develop petroleum in the abyssal floor, where nobody has tried it yet, than on the continental margins or in the shallower areas.

You must have control of a very large area to explore with the unquestioned right to select a portion of that for occupation to produce petroleum for as long as commercial production continues. That is why petroleum companies are earnest about finding a secure grantor of title. They have this in the coastal States on the continental margin. They may not like this particular government too well, its policies or its laws may not be too attractive, but it has a certainty of jurisdiction. It is better to deal with a multiplicity of these competing coastal States than to try to devise a system more to our liking that you never could get adopted as some universal mining code.

When it comes to the deep ocean floor you have nobody to turn to to secure a grantor of title. You must rely on general principles of international law, the freedom of the seas, the authority to flag state protect your operation, and this is not too secure obviously. Something better is needed for the long pull.

So I would not disagree with the desirability of some simple form of registration, something equivalent to mining claims, so there won't be any claim jumping. It gives you security of tenure and the quid pro quo is that you pay for it; you pay royalties or taxes to somebody, presumably some international regime. But idea of getting this mechanism into the control of a regime which is dedicated to con-

trolling prices, controlling rates of production and so on is abhorrent from the consumer's viewpoint.

Mr. FRASER. Let me just pursue that for a moment, and I think both of you have touched on it. The primary countries, for example, that produce copper are relatively limited. I mean I don't know what they all are—Zambia and Chile come to mind as two primary sources. Are there other producers of copper outside the United States?

Mr. LAYLIN. I speak as a lawyer, not as a mining engineer. You add Peru and those are the three countries to whom it is so predominantly important.

Mr. FRASER. What strikes me is how, among those three producers, they are going to control what obviously is a preponderant number of consumers. In other words, the United States is not going to be the only consumer—you have the rest of the world being consumers. How then are these three going to be able to effectively restrain or prohibit the development of copper as a deep seabed resources? I find this hard to understand.

Mr. LAYLIN. They are assisted also in petroleum by the exporting countries of Kuwait, Algeria, and Nigeria.

Mr. FRASER. We are talking about deep sea regime.

Mr. LAYLIN. This would be the regime that would control petroleum as well as copper and nickel.

Mr. FRASER. As I understand it, are not most of the known or identified copper deposits on this intermediate zone on the continental zone?

Mr. LAYLIN. Most of the known or identified copper deposits are in the area that is beyond any coastal state's special rights.

To answer your earlier question how are the few producers going to control what is a preponderant number of consumers, my answer is that I have myself been puzzled. I have a footnote in my statement. The amazing thing is how slow the delegates of the copper, nickel, and cobalt importing countries are in seeing that they are being lead by the nose.

Mr. FRASER. Well, they may not see it now but ultimately they would be voting members of any international regime.

Mr. LAYLIN. That is my hope.

Mr. FRASER. So that I find it a little difficult to accept the idea that a few producers are going to have as much control as has been asserted here.

Mr. LAYLIN. I wish you could attend one of these seabed meetings and see the lack of preparation of many of the delegates. Of course one should never attribute motives, but it is human nature not to see the rich get richer and the poor get poorer, and the countries that have the potentiality today or the companies are companies that are in the industrial countries. I do think that the time will come when these people will see that this is against their interests.

Mr. ELY. I share your puzzlement as to how a few producing countries could have the power to control the great bulk of countries which would want revenues from seabed minerals.

Mr. FRASER. And some copper. They need cooper, too.

Mr. ELY. Kuwait, which borders on the Persian Gulf and has the highest per capita revenue in the world, introduced a resolution to enforce a moratorium on the deep sea operations until the new convention is in effect.

Mr. FRASER. May that not have been motivated by a concern in this country that their interests are created along the way before a convention is agreed upon and that this may make it more difficult to get a convention that is acceptable? Isn't that likely to be the major concern?

Mr. ELY. I don't challenge Kuwait's motives.

Mr. FASCELL. Our price for oil.

Mr. FRASER. If there were a form of restraint of trade through limited production of all of the countries who could afford in a sense to pay a higher price as would be the United States, the poor countries who need copper and copper products for their own uses are less able to afford higher prices.

Mr. ELY. This is very high priced copper.

Mr. FRASER. In any event.

Mr. FASCELL. And copper is going down anyway it is a drag on the market.

Mr. LAYLIN. The lower price now is cyclical. The demand for copper in the long run is increasing, I am informed, at an average rate of 4½ percent a year.

The bill before this House, H.R. 13904, provides that it is to be replaced by the convention when it is agreed to and in the meantime the regulations are to be drafted by the United States, the very people that are proposing what the convention should do, and they will of course have the regulations to be in anticipation of what the United States is prepared to accept.

Mr. FRASER. Your argument is that this interim arrangement would not prejudice the establishment of an ultimate convention.

Mr. LAYLIN. I am arguing that it will promote a convention because unless we do this we will never have a convention.

Mr. FRASER. Which is likely to give rise to a problem.

Mr. LAYLIN. Here in this country, for instance?

Mr. FRASER. Yes.

Mr. LAYLIN. Bankers. Bankers have lawyers and the lawyers won't let the bankers give money until you have the law.

Mr. FRASER. Unless other countries reciprocate, we can only control competing claims between American nationals. Given the size of the oceans——

Mr. LAYLIN. But there are some places where they are a lot more interesting than others and these companies have spent millions of dollars finding those places and they don't want somebody to come along and ride piggyback not having spent a penny on exploration and come in and put a trawler right next to theirs. This legislation would prevent that; it prohibits any American from going out into the deep sea except under a license and he has got to conform with regulations that anticipate what will be the international regulatory provision.

Mr. FRASER. As I understand, the principal difference then among the three of you—and this is probably an oversimplification—is that Mr. Ely does not like any kind of an intermediate zone with international rights mixed in with coastal State rights, so far as the Continental Shelf extends at least——

Mr. ELY. I am willing to accept, however, obligations of the coastal State, set up by convention if you like with respect to pollution, revenue sharing, competing uses of the environment. I just don't think you need an international title holder or an international policeman there. The covenants would be carried out in due course.

Mr. FRASER. Mr. Knight is concerned about going ahead with the effect of an interim law on the part of the U.S. Government.

Mr. KNIGHT. It might possibly prejudice the possibility of a meaningful international organization to govern activities in the ocean.

Mr. LAYLIN. And my position on that is that I think it is a mistake to wait 10 years until what we can foresee now has occurred. The position that the U.S. Executive and the Senate is taking is, Please don't make us act one way or another until we see what progress we can make in July and maybe we can get some progress in July. If some of these delegates see that we mean business, they may buckle down to business and stop these interminable speeches. Thirteen Latin Americans put forth a proposal and 13 Latin Americans gave an hour speech each giving the same reason for the proposal.

Mr. KNIGHT. I would like to amend my statement or my interpretation of your statement. I agree that as a catalyst S. 2801 is a good tool. I think we ought to let S. 2801 and H.R. 13904 languish as a threat here in Congress. Let's not rush out and enact it in the next week. Let's wait perhaps through the July meeting, perhaps even through the 1973 conference. I am not asking to wait 10 years. Keep it here as a catalyst, but don't act precipitously when we are in the middle of delicate negotiations.

Mr. LAYLIN. I don't think there is much danger of that.

Mr. FRASER. Just one final question.

Your point of view it seems to me would not be incompatible with that of the Latin American countries; that is, while you might not see the need to assert full national sovereignty over a 200-mile limit, nevertheless if that happened you would find that compatible with your concerns, Mr. Ely.

Mr. ELY. If the 200-mile proposal is limited to seabed resources, there is not necessarily an incompatibility. The danger is that here you do have a direct invitation to expansion of the jurisdiction, once you set it up in terms of a number of miles, so as to include something other than just seabed minerals. I don't pretend to have any expertise at all about fisheries, for example.

Mr. FRASER. We really have not touched upon fisheries this afternoon, that is another kind of problem.

Mr. ELY. I would be dead opposed to a 200-mile territorial sea, for every reason. If the Latin Americans could be persuaded that their interest in seabed resources would be adequately protected by identification with the continental margin or 200 miles, whichever is greater, I would be content with it.

Mr. FASCELL. That is not what they are after.

Mr. FRASER. Just looking at the seabed resources, supposing the coastal State develops the technology—a number of enterprises using some technology involving the exploitation of the seabed—and then says, "Well, because of the structures or rigs or devices we now say that submerged vessels may not come within 10 miles of these operations for fear of some kind of a collision or some kind of an accident. This is one of the things that begins to worry the Department of Defense. Do you agree that that is a legitimate worry?

Mr. ELY. Yes. You cannot really divorce totally the concept of jurisdiction over the mineral operation of the seabed and some degree of control of the adjacent water columns for the reason you indicated, but these are reconcilable types of jurisdiction if there is goodwill.

Mr. FRASER. Well, they have to be reconciled through some kind of international agreement.

Mr. ELY. Yes. Part of President Nixon's proposal is that the coastal State must recognize competing uses of the environment.

Mr. FRASER. Which would imply that in a zone outside of the 200-meter limit there will be some kind of international regulation.

Mr. ELY. The 200-meter limit would not have anything to do with it, Mr. Chairman, but the 12-mile limit would, because out to 12 miles we are assuming this is the territorial sea and the coastal State has plenary jurisdiction. Beyond the territorial sea, we are talking about a jurisdiction of another type, the Continental Shelf doctrine. Here we are talking about the seabed only, and I think it has always been recognized that the coastal state controls the seabed resources.

Taking the North Sea, far beyond the territorial sea, hundreds of miles beyond it. Great Britain, for example, in licensing petroleum production, well out in the North Sea, must recognize the responsibility for a 500-meter zone, free from navigation, as the convention itself requires. It is perfectly possible to have a protocol, if you are going to deal with deep waters, that sets up a wider zone that ships must avoid.

Mr. FASCELL. Streetlights in the North Sea.

Mr. FRASER. Well, are you gentlemen satisfied with what we have explored?

Mr. LAYLIN. Could I say I was not chosen by the hard mineral industry to speak for them, I have been giving just my own views. I advise some people and sometimes they follow my advice.

Mr. FASCELL. We have not touched on the economic exploitation of the water itself and as a resource. I don't know how you could separate the two. Maybe I am dense this afternoon, but I have never seen the division of sovereignty on title between the land and the water and the air. I just don't see it. I don't see how you can divorce it. We have not discussed it. I don't know how you can arrive at any agreement without taking that into consideration.

Mr. ELY. If I could struggle with that a moment, I would like to do so. They are divorced now. Take the North Sea, for example again. There are oil wells 200 miles from shore, and they are operating under license.

Mr. FASCELL. Does the pipeline go under the ground or on top of the water?

Mr. ELY. Those will load probably on surface, but pipelines are under construction.

Mr. FASCELL. Is that by international easement?

Mr. ELY. No, sir.

Mr. FASCELL. Agreement of the coastal states?

Mr. ELY. Under the conventions, there is a right of use of the seabed for pipelines. This is recognized by the Convention of the High Seas. Gas is being brought into Great Britain by pipeline, but this does not mean that Great Britain, beyond the 3-mile line, can control navigation or say who is to fish.

Mr. FASCELL. That is a regional arrangement; they just happened to get together because it makes good business sense for them to do so.

Mr. ELY. No; they agreed on that when they——

Mr. FASCELL. Is that international law?

Mr. ELY. Yes.

Mr. FASCELL. Their agreement is international law?

Mr. ELY. Their Convention on the High Seas.

Mr. FASCELL. I don't mean the convention; their agreement was pursuant to the convention or within the framework of the convention. Is that international law?

Mr. LAYLIN. As between themselves.

Mr. FASCELL. It does not affect us though, does it?

Mr. ELY. I must go back to fundamentals. The Convention on the Continental Shelf controls only the mineral estate, if you want to call it that, not the water column. Simply because Great Britain controls the mineral estate out to the median line does not give it the control of fisheries. The convention denies this, in article 3.

Mr. FASCELL. Gives control of the pipeline—500 meters required under the convention, free zone.

Mr. ELY. Yes.

Mr. FASCELL. Is that title? Is it a sovereign right? Is it an easement under international law? Would a nonparty state have the same right as a sovereign state which is party to the agreement?

Mr. ELY. Yes, by the terms of the convention you do.

Mr. KNIGHT. This is no different than the splitup of property rights possible under this Nation's laws—one person can own the surface, another the minerals, and there can be an easement across the property. This is not unique or dramatic.

Mr. FASCELL. I didn't say it was until somebody else declares something else like we have a 200-mile territorial sea.

Mr. ELY. There is the difference. A 200-mile territorial sea is far different from a 200-mile resource zone.

Mr. FASCELL. Agreed. That is what we are faced with going into this convention in 1973.

Mr. FRASER. The Hughes Tool Co. in Los Angeles is working with manganese in these nodules. Are you saying they will not go ahead and try that in the absence of legislation?

Mr. LAYLIN. There was somebody else that tried to speak for the Hughes people recently. I think I will take the fifth on that one.

Mr. FASCELL. Note a lawyer's caution.

Mr. FRASER. You don't want to suggest what they might do?

Mr. LAYLIN. That is right, sir.

Mr. FASCELL. Not without direct authority in writing.

Mr. ELY. Mr. Chairman, you might like to have in your record in response to an earlier question the statement of the National Petroleum Council's committee on prospects for this industry.

Mr. FRASER. I would very much like to have that.

Mr. ELY. Their statement was:

Within less than 5 years, technology will allow drilling and exploitation in water depths up to 1,500 feet (457 meters). Within 10 years, technical capability to drill and produce in water depths of 4,000 to 6,000 feet (1,219 to 1,829 meters) will probably be attained.

Mr. FASCELL. Mr. Chairman, while we are at it, I think it would be most useful, if it is at all possible, to have a compendium; glossaries of terms that are used in the state of the art. Every meeting I have ever been to there is a new term. Every time a new one comes up, it has been interpreted about four different ways. It seems to me to discuss what we are discussing it would be useful to get the definitions down and determine whether there is any agreement on the definitions. I have a sneaking suspicion we may be talking in circles about nothing.

Mr. FRASER. Well, we are spending a lot of time on it.

Mr. FASCELL. Yes.

Mr. FRASER. Mr. Dellums, do you have other questions?

Mr. DELLUMS. No.

Mr. FRASER. I want to thank all of you. If you have anything else you want to submit for the record beyond those things you mentioned, we would be delighted to receive them.

I want to thank all of you for your help this afternoon. This has been most informative.

Mr. FASCELL. It certainly has.

Mr. KNIGHT. Thank you.

Mr. FRASER. The subcommittee is adjourned.

(Whereupon, at 4:29 p.m., the subcommittee adjourned.)

ADDITIONAL STATEMENTS FOR THE RECORD

Testimony of C. Maxwell Stanley Regarding Status of International Law of Sea Conference—April 27 1972

INTRODUCTION

My name is C. Maxwell Stanley. I am a Professional Engineer and Chairman of the Board of Stanley Consultants, Inc., international consultants in engineering, architecture, planning, and management, with broad experience in environmental affairs and resource development. I am also Chairman of the Board of HON Industries Inc., a national manufacturer of office furniture and material handling equipment. I am President of The Stanley Foundation, which for many years has encouraged study and education aimed at strengthening international organization. In this capacity I have chaired many international conferences, including one on "Environmental Management in the Seventies" held in Romania in 1971 and have authored technical and nontechnical papers on this subject. In July, 1972, I will chair a week-long international conference on the role of international organization in the management of ocean resources.

My testimony, submitted as a concerned citizen, focuses upon (1) the importance to the United States of the establishment of an ocean regime, a primary concern of the proposed U.N. Conference of the Law of the Sea and (2) our country's contrary posture as evidenced by our past and proposed policies with respect to the Outer Continental Shelf. The United States must reconcile these opposing points of view if we are to provide strong leadership to achieve rational management of the oceans under a viable ocean regime related to the United Nations.

As is true with many important and controversial issues, the United States seems to be speaking with more than one voice concerning its ocean policy. On the one hand, there is a draft U.S. Treaty first deposited with the U.N. Seabed Committee on August 3, 1970, which includes definitive suggestions limiting national jurisdiction and proposing an international regime for the equitable and rational management of the resources of the ocean space. On the other hand, many sincere and well organized interests would have our nation assume a far different ocean posture, particularly concerning jurisdiction over the resources of the Continental Margin. Yet these issues are indeed so complex and important, not only to our nation but to the entire world community, that we cannot afford to appear indecisive and equivocating. In short, I believe that the time is indeed propitious for Congress to give attention to ocean policy.

U.S. DRAFT TREATY

In May of 1970, President Richard Nixon proposed "that all nations adopt as soon as possible a treaty under which they would renounce all national claims over the natural resources of the seabed beyond the point where the high seas reach a depth of 200 meters (to 656 feet) and would agree to regard these resources as a common heritage of mankind. The treaty should establish an international regime for the exploitation of seabed resources beyond this limit." The proposal also included a provision for the collection of "substantial mineral royalties" to be "used for international community purposes, particularly, economic assistance to developing countries."[1] As noted earlier, the President's proposals were incorporated in a formal draft treaty presented several months later to the U.N. Seabed Committee.

This remarkable document had many antecedents, but the most significant and commonly accepted origin of most discussions concerning international

[1] Department of State Bulletin, June 15, 1970, p. 737.

management of ocean space is the Malta Proposal, first enunciated by the distinguished diplomat Arvid Pardo on August 17, 1967. The overall concept of an international regime coordinating and managing the resources of the seabed and ocean floor have long enjoyed support by many distinguished individuals and groups within the United States. For example, in July, 1966, President Lyndon B. Johnson stated, "Under no circumstances, we believe, must we ever allow the prospects of rich harvest and mineral wealth to create a new form of colonial competition among the maritime nations. We must be careful to avoid a race to grab and hold the lands under the high seas." [2] In 1967, under the Johnson Administration, the U.S. Ambassador to the United Nations supported the consideration of the Malta Proposal in the General Assembly and stated that the United Nations was in a position to assume leadership in enlisting the peaceful cooperation of all nations in developing the world's oceans and their resources. In 1968, before the ad hoc U.N. Seabed Committee, the United States came to recognize the "interest of the international community in the development of deep ocean resources," and the "dedication as feasible and practical for a portion of the value of the resources recovered from the deep ocean floor to international community purposes." [3]

In the U.S. Congress, serious studies of our ocean policy have been undertaken by the Senate Subcommittee on Oceans and Atmosphere, the Subcommittee on Oceans and International Environment, and the special Subcommittee on Outer Continental Shelf. In the House the Subcommittee on National Security Policy and Scientific Developments, the Subcommittee on State Department Organization and Foreign Operations, and this Subcommittee, among others, have dealt with United States ocean policy. Although Congress has yet to speak with any unanimity upon the subject of an ocean regime, many individual Senators and Congressmen have expressed support for this concept.

It is also worthy to note that the prestigious Lodge Commission recommended that "the United States make every effort to achieve definitive international agreements for the benefit of all nations that will establish narrow territorial waters for all states, with free transit of international straits; encourage rational use of fisheries so as to protect species from repetitious harvesting and extinction; and provide for international regime for the exploitation of the mineral resources of the seabed beyond national jurisdiction." The Lodge Commission also recommended that "the United States clearly indicate that leases granted for mineral resource exploitation on the seabed beyond the point where the high seas reach a depth of 200 meters may be subject to an international regime." Further, the Commission recommended "that the United States continue to urge the drafting of a seabed treaty close to or identical with its own proposal to the U.N. Seabed Committee in 1970." [4] In this respect, it is most gratifying to note that both in President Nixon's recent foreign policy report to Congress [5] and in Secretary of State Rogers' similar report [6] continued strong administration support for the U.S. Draft Treaty was expressed.

However, as has been stated elsewhere,[7] one of the principal weaknesses of the U.S. draft is that it does not impose a moratorium on new claims pending the conclusion of an international treaty and it would guarantee protection of leases granted and interest acquired by U.S. citizens prior to the coming into force of such a treaty.

BENEFITS OF AN OCEAN REGIME

Aside from the U.S. Draft Treaty, there have been numerous draft conventions and working papers proposed by such nations as Tanzania, the U.S.S.R., the United Kingdom, Bulgaria, Turkey, the Latin American nations, Afghanistan, and others. A common feature of these papers has been proposals for the creation of an international ocean regime. There have been significant differences, however, in the proposals for the institutional makeup, powers, and scope of the jurisdiction of the ocean regime. Without commenting here upon specific aspects of such a regime, I do believe that the interests of the United States

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[2] Edman A. Gullion, "Uses of the Seas," The American Assembly, Hall, Inc., 1968.
[3] George A. Douomani, "Exploiting the Resources of the Seabed," paper prepared for the Subcommittee on National Security Policy and Scientific Developments of the Committee on Foreign Affairs, U.S. House of Representatives, July 1971, p. 69.
[4] "Report of the President's Commission for the Observance of the Twenty-Fifth Anniversary of the United Nations," Washington, D.C., April 1971, pp. 31–33.
[5] "U.S. Foreign Policy for the 1970's," A Report to the Congress by Richard M. Nixon, President of the United States, Feb. 9, 1972.
[6] "U.S. Foreign Policy 1971," A Report of the Secretary of State, March 1972.
[7] Wolfgang Friedmann "Selden Redivivus-Towards the Partition of the Seas?," American Journal of International Law, October 1971, Vol. 65, No. 5, p. 759.

are best served by the creation of a strong international regime possessing some control over the exploitation of the resources of the Continental Margin, as well as the deep ocean floor, and with powers to apply standards concerning the conservation of living marine resources and the pollution of ocean space. The United States, in my opinion, has much to gain by the rational management of ocean resources through the creation of such a regime. Advantages include access for our commercial and naval vehicles through international straits within territorial seas, access for our long distance fishing fleets, and protection for ocean resources through the creation of such a regime. Advantages include access for our commercial and naval vehicles through international straits within territorial seas, access for our long distance fishing fleets, and protection for ocean resources and fisheries far from our coast aand jurisdiction. A more direct benefit might be some access to the mineral wealth (particularly petroleum) of the continental margins of other continents. In addition, it is worth noting that revenue disbursed by an ocean regime to less developed nations would tend to relieve the burden so long assumed by the United States in its foreign aid program.

The alternate to rational management of ocean resources through an ocean regime is horrendous. The coming age of massive development of the resources of the seabeds could precipitate a competitive scramble not unlike the colonial exploitation of Asia, Africa, and the New World by European powers. The ocean bed could be segmented by the major industrialized maritime powers in a pattern similar to the present partitioning of the land surface. Results in the future could be the eventual enrichment of a few nations (industrial ones with capacity to carry out the exploitation), the impoverishment of most nations, and the degradation of the ocean environment. Maritime powers would likely try to cling to the historically sound pattern of freedom of the surface of the seas, even as they exploited the resources below. Coastal nations would rush to extend limits of national jurisdiction on the surface as well as on the seabeds.

A desire to prevent catastrophe in the management of the oceans is reason enough to support the development of a rational ocean regime, established with suitable authority. Vesting the United Nations with the authority and responsibilities of ocean management (through an international ocean authority) could result in other substantial benefits. This could lead to a more effective United Nations better equipped to deal with fundamental political and security problems. In addition, revenue derived from leasing and royalties in connection with resource development could help finance United Nations activities, making the organization less dependent upon national contributions.

More effective international organization—a strengthened United Nations—seems essential if the nations of the world are to adequately manage crises and deal with global problems. Progress toward sane, secure world order depends in large part upon the development of effective world organization. In my opinion, this need is a further argument for the establishment of an ocean regime to rationally manage this planet's ocean space.

OCEAN POLICY CONTROVERSY

There is a lack of unanimity among Congressional approaches to United States ocean policy due to previous conventions and proclamations as well as sincere and well-organized efforts of interest groups. The degree of controversy is clearly indicated by the testimony submitted during recent hearings held by the Senate Committee on Interior and Insular Affairs Subcommittee on the Continental Shelf.

In 1958, representatives of 86 nations met in Geneva to participate in the U.N. Conference on the Law of the Sea. Among the several conventions coming out of the Geneva Conference was The Convention on the Continental Shelf, which defined the shelf as referring "to the seabed and subsoil of the submarine area adjacent to the coast but outside the area of the territorial sea to a depth of 200 meters or beyond that limit to where the depths of the super adjacent waters admit of the exploitation of the natural resources of the said area." This latter point, which some international lawyers have termed the "exploitability clause," has had, in my opinion, disastrous implications for the rational management of ocean resources.

In the United States this clause of the Geneva Convention has been seized by special interests as sufficient authorization to exploit off-shore areas in excess of the 200 meter depth. In essence, the original and widely accepted geological division between the Continental Shelf (out to 200 meters and representing about 7.5 percent of the ocean bed) and the rest of the Continental

Margin (slope and rise) has been conveniently forgotten and replaced by a view which purports to expand the coastal states' control over the entire Continental Margin (comprising nearly 25 percent of the ocean bed) to a point contingent only upon the technical ability to exploit.

The problem with this parochial view of "one can claim what one can reach" is that it must be presumed that other nations can do likewise. As Senator Claiborne Pell of Rhode Island has argued, "thus the larger the off-shore zone we contemplate bringing under our national jurisdiction means that, on balance, we are closing off a much larger zone world wide, assuming, as we must, that other states would be entitled to claim a similar area."[8] Proposals to extend national jurisdiction are contrary to this nation's historic support of the freedom of the seas in the interests of communication and security. Such policies are also in conflict with the universal concept that the resources of the seas are the common heritage of man. We must surely avoid making the mistake of similar proportions to that of the Truman Proclamation of 1945 which had the ultimate result of opening a Pandora's Box of contending proclamations by many of the coastal nations of the world.

RECOMMENDATIONS

In conclusion, I recommend that the United States, in enlightened self-interest, support and lead efforts to create an effective ocean regime. Rational management of the oceans can be best achieved through a suitable ocean regime linked to the United Nations. In support of this end, Congress should:

(1) Encourage full participation by the United States in the preparations for and conduct of the 1973 Conference on the Law of the Sea proposed by the United Nations.

(2) Give strong support to the principles of the U.S. Draft Treaty, presented to the U.N. Seabed Committee.

(3) Refrain from legislation contrary to the spirit of this document.

(4) Consider appropriate changes in the existing legal regime and federal organizational structure pertaining to the Outer Continental Shelf, consistent with the objective of an effective ocean regime.

(5) Pending the acceptance of an international convention on ocean regime, limit United States exploitation of the Continental Margin beyond the claimed 12 mile territorial limit to those areas where the depth of the sea does not exceed 200 meters.

(6) Defer awarding any further leases for exploitation beyond the 200 meter line.

Such action would place the United States in a position of strong leadership in the world's efforts to assure rational management of the great expanse of the globe's surface that is not now and never has been under national jurisdiction.

STATEMENT OF DR. JOHN J. LOGUE, DIRECTOR, WORLD ORDER RESEARCH INSTITUTE, VILLANOVA UNIVERSITY, VILLANOVA, PA.

Among important public questions before the world, the ocean question is almost unique in its combination of urgency and obscurity. Until quite recently, it has been the province of specialists such as oceanographers and international lawyers. The technical vocabularies of these specialized fields have made it unusually difficult for the layman—or even the social scientist—to enter the field. Yet few public problems are in such great need of public attention and thus of clarification.

In recent years technological progress has produced an ocean problem of giant dimensions and great urgency. Unless the years immediately ahead see a major effort at political and technical innovation, we may see a jungle-like struggle for the riches of the ocean floor and a dangerous—potentially fatal—deterioration in the ocean environment.

But if the nations do put forth their best efforts the world may yet see timely steps taken to reverse the ecological threat and to exploit the oceans' treasures for all mankind. As a result we may see the growth of a new spirit of cooperation and confidence which will embolden men to try new approaches to other world problems including war itself.

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[8] George A. Doumani, "Exploiting the Resources of the Seabed," paper prepared for the Subcommittee on National Security Policy and Scientific Developments of the Committee on Foreign Affairs, U.S. House of Representatives, July 1971, p. 66.

The major parts of the complex, multifaceted ocean question can be stated briefly. Advanced nations are facing an imminent *energy crisis* which has sent them in search of new sources of oil and gas in the seabed. And the seabed is unbelievably rich in both resources. This search has precipitated a revolution in *ocean technology* making possible ever more efficient exploration and exploitation of oil, gas, and mineral deposits in the ocean at ever greater depths. To take but one example: seabed oil production, which was but 1 percent of domestic U.S. production in 1956, had become 17 percent by 1970. And seabed oil, already 20 percent of total world oil production, may reach 33 percent by 1980. It is important to add that most ocean wealth including most marines species and certainly most of the ocean wealth that is capable of exploitation in the near future is contained in the continental margin.

Ocean pollution is another very important aspect of the ocean problem. We have the testimony of leading scientists to the great damage already done to the ecology of the oceans by ocean dumping, oil leaks and blowouts, air pollution, lead, arsenic, DDT and other substances. Indeed we are told on good authority that ocean pollution threatens the very life of the oceans and thus all human life. *Ocean armament* is another part of the problem. In the form of nuclear weapons, missiles and submarine systems, ocean armament has become the heart of superpower weaponry.

The value of *ocean wealth* is now known to be immense. Thus, we know that seabed oil is worth many trillions, i.e., many thousands of billions of dollars. This ocean wealth is potentially a cornucopia of plenty to aid the developing nations and to give the United Nations the independent financing it has lacked since its birth. But pessimists remind us that without proper controls, ocean wealth might lower world commodity prices and thus greatly damage the economies of certain developing countries. And legal and political obstacles may delay or even prevent exploration and exploitation which is technically feasible. This will happen where there is uncertainty as to who holds title to a resource-rich part of the seabed or fear that a nation may unilaterally change the terms of an exploitation contract that it has made with another nation or a private or public corporation. And pessimists remind us that ocean wealth is a mixed blessing. For when it is exploited, when it is transported and when it is used to modernize national economies—on all these occasions it may add significantly to the ecological threat to mankind.

Ocean law—developed in an age when the three-mile range of a cannon was used to define national territorial waters—is undergoing a revolution. There is a dramatic race between new and expanding national claims to the seabed and its wealth and the inspiring attempt, under United Nations auspices, to put a generous portion of the ocean and its wealth under international title as "the common heritage of mankind." *Ocean institutions* will almost certainly be created to deal with the ocean problem. The question is not whether we shall have ocean institutions but rather when and what kind and with what powers and jurisdiction.

Ocean politics will decide whether and, if so, how the international community will deal with the ocean problem. Ocean political currents surface in the spirited debates and discussions of the United Nations General Assembly's 91-nation Seabed Committee and its subcommmittees. In December 1970, after three years of work by the Seabed Committee, the General Assembly adopted an historic Declaration of Principles governing the seabed and the ocean floor. While this carefully worded declaration avoided a determination of the boundary between the national territorial sea and the international zone, it did insist that there is an international zone which is "the common heritage of mankind." On the same day, the General Assembly decided to convene a conference on the law of the sea in 1973. Two central questions for the conference will be the boundary question and the nature of the international machinery to be established. In 1945 as is well known, President Truman proclaimed that the United States has jurisdiction over its continental shelf out to the 200-meter depth line. This American example of unilateral extension of national claims—and thus unilateral modification of international law—was followed by similar unilateral actions on the part of many states. The most ambitious were those Latin American states which claimed jurisdiction out to two hundred miles—and over fishng as well as over seabed resources.

In 1958, at a special UN Conference on the Law of the Sea, a convention was adopted which gives coastal states sovereignty over seabed and ocean floor resources out to the 200-meter depth line. But the Conference added an "exploit-

ability" clause which said that coastal states could claim additional seabed as it became "exploitable." It is becoming exploitable and claims are expanding.

In August 1970, the U.S. introduced "for discussion purposes" a complex and comprehensive Draft Seabed Treaty. That treaty quickly became the focus of much of the Seabed Committee's discussions. In due time, other drafts or partial drafts were forthcoming: from the Latin American group, the United Kingdom, France, Tanzania, the Soviet Union, Malta and others.

The U.S. Draft Treaty would have national claims end at the 200-meter depth line, i.e., the seaward edge of the legal continental shelf. The International Seabed Area would begin at the shelf edge. It would be divided into two parts: a coastal state Trusteeship Area made up of the outer continental margin (i.e., the slope and the rise); and, beyond the margin, a Deep Ocean Area. Each coastal state would decide whether, by whom and on what terms its portion of the Trusteeship Area would be developed. However, the Area would also be subject to some regulation by an International Seabed Resources Authority (ISRA). And ISRA would receive a substantial percentage of the revenues earned from fees and payments by those exploiting the Area's oil, gas, and mineral deposits. ISRA would receive all of the fees and payments from exploitation of the Deep Ocean Area. ISRA's funds would be used for a variety of purposes but particularly to promote the economic advancement of developing states.

Power in the U.S. Draft Treaty would be shared by a one nation-one vote Assembly and a powerful twenty-four nation Council. Decisions in the Council would require a majority of what commentators have called its Big Six, i.e., the six most technologically advanced states, and a majority of its Little Eighteen, i.e., the elected Council members, at least twelve of whom would have to be developing states. These plus a Tribunal and certain other organs would try to establish stability in the oceans in order to facilitate their exploration and exploitation. The Tribunal, it is important to add, would have compulsory jurisdiction and its decisions would be binding on the parties.

UN General Assembly debates on the ocean question have seen a healthy frankness as to the "interests" of different groups of states. It is not always clear what, if any, interest most affects the vote of a particular state. Yet some observers think they see a pattern of groups of states defined by common interests. The pattern is something like the following: *Coastal states* tend to favor a broad territorial sea. *Landlocked states* and *shelf-locked states* (i.e., states whose shelf ends in another state's shelf rather than in their own continental slope) tend to favor a narrow territorial sea and thus a large international zone. *Technically advanced states* with expertise at oil and mineral extraction want to put those skills to use as soon as and as widely as possible. They also want a stable arrangement which encourages substantial and profitable investment in oil and mineral extraction in the seabed. These states hope that the expansion and diversification of oil sources will keep prices low—or make them lower—and reduce their dependence on traditional suppliers. *Developing states* want a share in the financial yield of an international seabed authority. They tend to fear exploitation by the technically advanced states and are concerned, if they are also *oil and mineral producing states*, as to a possible threat to world commodity price levels as production from these new sources enters the world commodity market.

Maritime states want to protect the traditional freedom of the seas. *Fishing states* are particularly concerned about pollution, worried about the exhaustion of fish stocks, increasingly opposed to "foreigners" fishing in their waters—but not happy about being excluded from the home waters of these same foreigners. *Nuclear armed states* are apprehensive concerning further international prohibitions on seabed armament. They fear that expanding national claims may keep their submarines out of certain waters, especially certain critical straits which have traditionally been regarded as international waters.

The above catalogue does not include all significant groups of states. And, needless to say, most states fall into at least two of the indicated categories.

There are many crucial questions which the 1973 Conference must face. They include the following: Should the international zone begin at three miles? At 200 miles? At 200 meters depth; Should there be different boundaries for different purposes, e.g., for fishing rights, mining, commerce, defense? Or is a "single boundary" more logical and sensible, however difficult to achieve? And what of the "coastal state trusteeship" in the complex U.S. Draft Treaty? Is it, as its champions urge, the best possible compromise between coastal state and internationalist ambitions? Or is it, as some have suggested, a disguise for coastal state appropriation of the seabed?

What kind of executive, legislative and judicial arms should the international ocean regime have? Should nations, regardless of population, wealth, skills, and other considerations, have equal votes in the regime? Or should some formula be adopted which will give some weight to one or more of those other factors? What relation should the ocean regime have to other UN agencies? To national governments? To regional organizations? To corporate enterprises? Should the ocean regime be a mere seabed claims registration agency? Or, at the other extreme, should it be a comprehensive body with licensing, inspection, adjudication, operating and other powers? Should it have authority over marine pollution? Fishery disputes? The world prices of commodities? How, if at all, shall it be able to enforce its determinations? Should revenues go directly to states? Or though the regime? Under what formula? With what, if any, conditions?

In this catalogue of ocean questions several concerns and attitudes of the developing nations should be stressed. Most of these nations are strongly opposed to the great power of the Big Six in the U.S. Draft Treaty. On the other hand many, perhaps most, of these nations want to give the proposed seabed authority—or ocean authority—a power to "explore and exploit" the seabed resources in the international area. This "explore and exploit" power might not be used. It would not rule out exploration and exploitation by other entities. Nevertheless it is very important to these nations that the international authority be granted this power. There is also strong sentiment in favor of giving the ocean authority some say as to the amount of seabed resources entering the world commodity market and the prices at which it would be sold.

It seems certain that the technologically advanced states will have to yield to the developing countries on one or more of the above points if they expect the "200-milers" to settle for anything less than full sovereignty over—and full profits from—the resources out to the 200-mile line.

It is clear that the major concern of the United States government in the ocean debate is freedom of navigation and especially freedom of transit through international straits. High among its other goals are "security of investments" and "stability of expectations" in as wide an area as possible of the international seabed. However the U.S. petroleum industry is skeptical as to the possibility of achieving either of these goals in the international area off other nations' coasts. And so the industry is urging that the U.S. government claim as U.S. property the entire continental margin off the U.S. coasts so that at least in that large—and rich—area there will be security of investments and stability of expectations.

The U.S. mining industry professes similar doubts as to the possibility of achieving a workable international regime in the near future. But it probably also fears the terms which the ocean regime might set for the exploitation of manganese nodules in the deep seabed. And so, in spite of a UN Moratorium on the exploitation of the deep seabed the U.S. mineral industry is asking the U.S. government to authorize and regulate such exploitation, relying on reciprocal legislation by other technologically advanced nations to prevent an anarchy of competing claims. This would constitute an interesting and potentially very dangerous end run around the UN Moratorium.

All these considerations suggest that the world needs an ocean strategy to deal with this great ocean problem. Such an ocean strategy can play a central part in an overall peace strategy. It could provide funds to bridge the development gap, to lessen the threat from ocean pollution and even to help pay for a UN peacekeeping force. And the new or improved institutions which an effective ocean solution might require could help develop a new faith in the efficacy of the United Nations.

There is still time for the nations of the world to respond positively and creatively to the ocean opportunity. But there is not much time.

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